

**Noise Impact Analysis
Haile Gold Mine
Kershaw, South Carolina**

Prepared for:

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Executive Summary

As per an agreement between Vibra-Tech Engineers, Inc. and Haile Gold Mine, Inc. Vibra-Tech has completed a noise impact analysis for the proposed Haile Gold Mine operation in Kershaw, South Carolina. This noise impact analysis focused on all major noise sources associated with the operation of the mine including rock crushing, ore processing equipment, rock drilling, and mobile hauling equipment with backup alarms.

In general, noise impacts from mining are assessed based on the overall contribution or increase of existing or background noise levels. Thus, it is very important to have accurate and representative background or ambient noise level data to conduct the impact assessment. For this project, South Technical Services, LLC (STS) has previously completed two background noise studies; one completed in November 2010, and the second in September 2011.

Based on the human perception and noise impact assessment performed for the proposed Haile Gold Mine operation, locations in Lancaster County for which STS conducted ambient monitoring, no significant change to existing ambient conditions were determined for noise receptor locations when compared to the projected L_{\max} sound levels to ambient sound levels.

For property boundary locations for which the Lancaster County Ordinance # 309 as amended (including amendment by Ordinance # 979 to include Section 4.1.29, Mining and Extraction Operations) may be applied, the maximum projected sound pressure levels from ore processing equipment meet the specific octave band criteria for both non-residential and residential nighttime limits which are the most restrictive. The projected total noise levels at locations within a one mile radius of the proposed Haile Gold Mine ranged from 39 to 45 dBA.

All of the above results were obtained when performing the sound level projection analysis and impact assessment under the worst case condition of all fifty one (51) noise sources operating simultaneously and also for nine (9) noise sources associated with ore processing equipment. Under normal operating conditions of the proposed mine, it is probable that all 51 noise sources used in this analysis would not be running simultaneously. As the pit and bench areas of the mine are developed, the elevation of mobile and drilling equipment may be lowered, and noise levels may be further attenuated due to the benefit of developed berms. As overburden storage areas (OSA's) continue to develop, the OSA elevation may increase thus providing additional noise attenuation.

**Noise Impact Analysis
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Introduction

As per an agreement between Vibra-Tech Engineers, Inc. and Haile Gold Mine, Inc. Vibra-Tech has completed a noise impact analysis for the proposed Haile Gold Mine operation in Kershaw, South Carolina. The noise impact analysis focuses on all major noise sources associated with the operation of the mine, including rock crushing, ore processing equipment, rock drilling, and mobile hauling equipment with backup alarms.

Discussion of Sound Level Measurements

The measurement of noise involves quantifying both its rate (frequency in Hz) and intensity (pressure) relative to normal atmospheric pressure. People do not perceive all frequencies with equal sensitivity; rather, they respond to higher frequencies more than lower frequencies. The following discussion of sound levels measurements describes the types of measurements collected for these studies.

dB

A decibel (dB) is a unit of measure of sound pressure. The base or threshold of hearing is 0 dB. The calculations of dB are logarithmic allowing very large and very small relationships of sound pressure to be compared.

dBA

The A-weighted decibel level (dBA). A dBA sound level measurement weighs the various frequency components of a sound as perceived by the human ear in order to yield a single number indicator of its relative loudness. All measurements used in this study are dBA.

Maximum – dBA L_{max}

The maximum noise level recorded during a sample period.

Equivalent Sound Level – L_{eq}

L_{eq} is a measurement over a period of time and is the steady state sound level, which contains the same acoustic energy as the measured time varying sound level for the time period of the measurement.

Octave Band Levels

The various frequencies involved in a dBA sound level measurement can be broken down into a series of recordings known as octave band measurements. The octave band frequency ranges are listed by the center frequency of a band with the lower end of the band being approximately 70 percent of the center frequency and the upper end frequency twice the lower end. For example, 1 kHz band covers approximately 700 – 1400 Hz. The center frequencies are 63, 125, 500, 1000, 2000, 4000 and 8000 Hz.

Combining Sound Levels

In general, the approximate addition of sound levels can be made using the table below.

Table 1. Approximate Addition of Sound Levels

<i>Difference between two sound levels</i>	<i>Add to the Higher of the two sound levels</i>
<i>1 dBA or less</i>	<i>3 dBA</i>
<i>2 to 3 dBA</i>	<i>2 dBA</i>
<i>4 to 9 dBA</i>	<i>1 dBA</i>
<i>10 dBA or more</i>	<i>0 dBA</i>

STS Sound Descriptor Definitions

As per the STS ambient monitoring reports of November 2010 and September 2011, the sound level descriptor for maximum (L_{max}), Peak (L-Peak), and Leq are defined as follows:

Maximum

This is the maximum dBA reading recorded during the sample period. The maximum is a time weighted average of the highest dBA level over a one second sample.

L-Peak

The highest dBA value recorded during the sample period. The peak is sampled at a much faster rate than the maximum. The peak value is sampled at a rate of 50 microseconds. This type of measurement is typically used to evaluate instant/loud sounds such as gunshots.

Leq – Energy Equivalent Sound Level

The level of a constant sound, over a specific time period, that has the same sound energy as the actual (unsteady) sound over the sample period. This type of sample is typically used for environmental noise analysis and is commonly used for comparison to noise ordinances.

Ambient Sound Level Study

For this project, South Technical Services, LLC (STS) has previously completed two background noise studies, one in November 2010, and the second in September 2011. Please refer to STS reports for details of the studies.

The STS reports summarize ambient sound levels measured and reported at ten locations. One hour Leq tests were reported at four 4 locations, with L Peak and L Peak averages reported at all ten locations. L_{max} levels were plotted for two of the ten locations and not summarized in the reports.

Because one hour Leq and L_{max} levels were not reported at all locations, Vibra-Tech used the L-Peak Average and L-Peak sound levels from the STS reports to conduct the sound level projection analysis and noise impact assessment for ambient noise locations. The lowest L-Peak Average and L-Peak values were used in the noise impact assessment.

A summary of the ambient data provided in the STS reports is provided in Table 1 below. The yellow shaded values represent ambient L-Peak average levels used for impact assessment at residential or commercial receptor locations. The blue shaded values represent ambient L-Peak sound levels.

Table 2. Summary of ambient data collected by STS at locations near the proposed Haile Gold Mine in Kershaw, South Carolina.

Monitoring Location All measurements in A-weighting –All are L-Leq 1 hour)	Mid Morning Results		Late Afternoon /Evening Results	
	Average Peak	Peak	Average Peak	Peak
Haile Baptist Church (HBC) – L Peak	72.5	89.0	68.0	86.1
Haile Baptist Church (HBC) – Leq (1 hr)	49.7	63.6	44.6	58.5
Kershaw Industrial Park (KIP) - L Peak	79.4	98.7	77.0	89.6
Kershaw Industrial Park (KIP) – Leq (1 hr)	56.6	68.1	52.4	63.1
*Corner of Gold Mine Highway and Haile Gold Mine Road (Loc 1)	63.6	76.5	*57.9	*69.8
*Along Haile Gold Mine Road (Loc 3)	56.6	68.1	*52.4	*63.1
Corner of Snowy Owl and Gold Mine Highway (House SO/GMH)	56.6	71.6	55.1	63.2
Houses along Snowy Owl Road (HouseSOR)	49.1	69.8	50.2	65.1
Gold Mine Highway and Route # 265 (GMH-Rt265)	60.9	72.7	58.0	62.4
Corner of Snowy Owl Road and State Road 219 (SOR219)	58.1	64.5	54.1	59.2
Daytime Ambient				
5099 Gold Mine Highway (5099GMH) – L Peak	74.5	94.0		
5099 Gold Mine Highway (5099GMH) – Leq (1hr)	50.7	65.6		
Intersection Estridge Ave with State Road 29-204 (SR29/204) – L Peak	79.4	93.4		
Intersection Estridge Ave with State Road 29-204 (SR29/204)-Leq (1hr)	62.3	63.1		

* Location along highway in right-of way not associated with any residential or commercial property

Sound Level Projection Analysis

In order to assess the overall potential noise impact from the mine, sound level projection analysis for the Haile Gold Mine operation was completed. All sound level projections were made using the GeoSonics sound propagation model SONCALC. This mathematical model was inspired by the NOISECALC model, developed by D. A. Driscoll, formerly with the New York State Department of Environmental Conservation. Both SONCALC and NOISECALC sound propagation models use the barrier calculations set fourth in the book by L. L. Beranek Noise and Vibration Control, and use American National Standards Institute (ANSI) standard atmospheric attenuation and standard sound propagation formula.

For assessing the entire operation, sound level projection analysis was based on the L_{max} source sound level from fifty one (51) noise sources associated with the proposed Haile Gold Mine operation. The L_{max} noise source data for all stationary, mobile, and backup alarm noise sources proposed to be in operation at the mine and used in the model were provided by Haile Gold Mine and from historical data collected by Vibra-Tech. A summary of noise source information used in the model is summarized in Appendix A. For each noise source, the maximum noise level at a specific reference distance along with the State Plane coordinate and elevation were input into the model. It should be noted the model assumes that all 51 noise sources were operating at the same time.

The combined L_{max} sound level from all 51 noise sources was projected to thirty nine (39) receiver locations. The receiver locations consisted of ten (10) locations for which STS had previously conducted ambient noise level testing, twelve (12) locations around the property boundary of the proposed mine, and nine (9) locations representing a one mile radius around the mine, and eight (8) receiver locations located in Kershaw County. For each receiver location, the State Plane coordinate and elevation were input into the model. A summary of all receiver location information appears in Appendix B. Again, the model assumed that all noise sources were active at the same time to represent the most conservative and worst case approach. A map indicating the projected L_{max} noise level to all receiver locations is included in Appendix C. For sound level projection analysis of ore processing equipment, nine (9) noise sources were used in the model to predict octave band sound levels at property boundary locations around the proposed mine.

Based on the data provided by STS in Table 1 above, L- Peak Average and L- Peak are the two parameters that may represent the L_{max} (by definition above) for use in comparing the ambient L_{max} to the projected L_{max} .

Human Perception and Impact Assessment

In assessing and mitigating noise impact, it is generally accepted that human perception and response to increases in sound pressure levels will vary depending on the decibel level increase. An increase or change in sound pressure level of 5 dB or less is considered imperceptible or unnoticeable to people. An increase of greater than 6 dB is considered intrusive, with a 10-15 dB increase very noticeable, and a 15-20 dB objectionable. Increasing the sound pressure level more than 20 dB is considered very objectionable to intolerable.

Table 3. Human reaction to increase in ambient sound level

<i>Increase in Ambient SPL dBA</i>	<i>Human Reaction</i>
<i>0</i>	<i>Unnoticed</i>
<i>Under 5</i>	<i>Unnoticed to tolerable</i>
<i>5 - 10</i>	<i>Intrusive</i>
<i>10-15</i>	<i>Very Noticeable</i>
<i>15 - 20</i>	<i>Objectionably</i>
<i>Over 20</i>	<i>Very objectionably to intolerable</i>

For this project, ambient sound level data was previously measured at ten (10) locations around the proposed mine by STS in Lancaster County. Using this ambient data, a comparison of existing (ambient) L-Peak Average and L-Peak data to the projected L_{max} noise levels for these locations was completed in order to determine potential noise impact based on increase to ambient conditions.

For other receptor locations located in Lancaster County for which no ambient data was measured, the projected L_{max} levels are reported.

Lancaster County Noise Ordinance

The State of South Carolina, County of Lancaster Ordinance # 309, Section 4.1.29 (11) – Section 4.1.16 imposes noise restrictions on any ore processing facility associated with the mining operation. This ordinance has been included in Appendix D of this report.

Section 4.1.16 Manufacturing /Processing Uses:

Noise: All noise shall be muffled so as not to be objectionable due to intermittence, beat, frequency, or shrillness. In no event shall the sound pressure level of noise radiated continuously from a facility exceed at the lot line the values given in the table 4 below in any octave band or frequency. Sound pressure level shall be measured with a sound level meter and an octave band analyzer that conforms to specifications published by the American National Standards Institute.

A. Nighttime Schedule

Maximum permissible sound pressure levels at the lot line for noise radiated continuously from a facility between the hours of 7 p.m. and 7 a.m.

Table 4. County of Lancaster Ordinance # 309 Maximum Permissible Sound Pressure Level

<i>Maximum Continuous Sound Pressure Levels – Nighttime Schedule</i>		
	<i>Sound Pressure Levels – (In Decibels)</i>	
<i>Frequency Band (cycles per second Hz)</i>	<i>At Non-Residential Lot Line</i>	<i>At Residential Lot Line</i>
<i>20-75</i>	<i>69</i>	<i>65</i>
<i>76-150</i>	<i>60</i>	<i>50</i>
<i>151-300</i>	<i>56</i>	<i>43</i>
<i>301-600</i>	<i>51</i>	<i>38</i>
<i>601-1200</i>	<i>42</i>	<i>33</i>
<i>1201-2400</i>	<i>40</i>	<i>30</i>
<i>2401-4800</i>	<i>38</i>	<i>28</i>
<i>4801-10000</i>	<i>35</i>	<i>20</i>

The American Standard Z24.10-1953 for octave band filter specifications has been updated from band edge (old bands) frequencies to octave band filters termed *preferred frequencies* (new bands) as specified in the American Standard S1.6-1960. Since band edge sound level equipment is no longer available, an interpolation formula is used to convert the old bands to the new bands. Based upon this formula, the Lancaster County octave bands have been corrected and updated. The updated levels for the preferred octave band frequencies would be as follows:

Table 5. County of Lancaster Ordinance # 309 Updated Octave Band Sound Pressure Levels

Updated Maximum Continuous Sound Pressure Levels – Nighttime Schedule		
	Sound Pressure Levels – (In Decibels)	
Octave Band (cycles per second Hz)	At Non-Residential Lot Line	At Residential Lot Line
63	66.9	62.9
125	59.0	49.0
250	54.8	41.8
500	48.9	35.9
1000	41.5	32.5
2000	39.5	29.5
4000	37.3	27.3
8000	34.3	19.3

B. Daytime Schedule

Maximum permissible sound pressure levels at the lot line for noise radiated from a facility between the hours of 7 a.m. and 9 p.m. shall not exceed the limits of the preceding table except as specified and corrected below:

Table 6. County of Lancaster Ordinance # 309 Maximum Permissible Sound Pressure Level for Daytime exceptions

Maximum Continuous Sound Pressure Level Exceptions – Daytime	
Type of Operation in Character of Noise	*Correction in Decibel
Daytime Operation Only	Plus 5
Noise source operates less than 20 % of any one-hour period	Plus 5
Noise source operates less than 5 % of any one-hour period	Plus 10
Noise source operates less than 1 % of any one-hour period	Plus 15
Noise of Impulsive character (hammering, etc.)	Minus 5
Noise of periodic character (hum, speech, etc.)	Minus 5
<i>* Applied only if these corrections may be applied to the preceding table.</i>	

Results

STS Ambient Locations: Average L-Peak Impact Assessment

Tables 7 and 8 below provide a summary of the projected noise levels and impact assessment based on increase to existing ambient noise levels for ten receptor locations located around the proposed mine operation. These results are based on the Average L-Peak levels reported by STS and worst case elevations of noise sources. Please note that if measured ambient levels are the same or higher than projected L_{max} noise levels, no change to ambient noise will be shown in Table 8. The computer model output for this analysis is included in Appendix E.

Table 7. Projected L_{\max} noise levels for noise sources compared to the existing Average L-Peak ambient noise levels.

Locations for which STS measured ambient sound levels	Projected L_{\max} (dBA) Without background	Projected L_{\max} (dBA) With background	Measured Ambient Average L-Peak (dBA)
Haile Baptist Church (HBC)	50	68	68
Kershaw Industrial Park (KIP)	52	77	77
*Corner of Gold Mine Highway and Haile Gold Mine Road (Loc 1)	56	60	57.9
*Along Haile Gold Mine Road (Loc 3)	52	55	52.4
Corner of Snowy Owl and Gold Mine Highway (House SO/GMH)	50	56	55.1
Houses along Snowy Owl Road (HouseSOR)	53	54	49.1
Gold Mine Highway and Route # 265 (GMH-Rt265)	46	58	58
Corner of Snowy Owl Road and State Road 219 (SOR219)	52	56	54.1
5099 Gold Mine Highway (5099GMH)	43	74.5	74.5
Intersection Estridge Ave with State Road 29-204 (SR29/204)	42	79.4	79.4

Table 8. Change (increase) to existing ambient noise level and human reaction to increase based on existing L-Peak Average ambient levels

Locations for which STS measured ambient sound levels	Change in Ambient	Human Reaction to increase in ambient
Haile Baptist Church (HBC)	0	<i>Unnoticed</i>
Kershaw Industrial Park (KIP)	0	<i>Unnoticed</i>
*Corner of Gold Mine Highway and Haile Gold Mine Road (Loc 1)	2.1	<i>Unnoticed to tolerable</i>
*Along Haile Gold Mine Road (Loc 3)	2.6	<i>Unnoticed to tolerable</i>
Corner of Snowy Owl and Gold Mine Highway (House SO/GMH)	0.9	<i>Unnoticed to tolerable</i>
Houses along Snowy Owl Road (House SOR)	4.9	<i>Unnoticed to tolerable</i>
Gold Mine Highway and Route # 265 (GMH-Rt265)	0	<i>Unnoticed</i>
Corner of Snowy Owl Road and State Road 219 (SOR219)	1.9	<i>Unnoticed to tolerable</i>
5099 Gold Mine Highway (5099GMH)	0	<i>Unnoticed</i>
Intersection Estridge Ave with State Road 29-204 (SR29/204)	0	<i>Unnoticed</i>

STS Ambient Locations: L-Peak Impact Assessment

Tables 9 and 10 below provide a summary of the projected noise levels and impact assessment based on an increase to existing ambient noise levels for ten receptor locations located around the proposed mine site. These results are based on the L-Peak levels reported by STS and worst case of all sources operating simultaneously. Please note that if measured ambient levels are the same or higher than projected L_{\max} noise levels, no change to ambient noise will be shown in Table 9. The computer model output for this analysis is included in Appendix F.

Table 9. Projected L_{\max} noise levels for noise sources compared to the existing L-Peak ambient noise levels

Locations for which STS measured ambient sound levels	Projected L_{\max} (dBA) Without background	Projected L_{\max} (dBA) With background	Measured Ambient L-Peak (dBA)
Haile Baptist Church (HBC)	50	86.1	86.1
Kershaw Industrial Park (KIP)	52	89.6	89.6
*Corner of Gold Mine Highway and Haile Gold Mine Road (Loc 1)	56	69.8	69.8
*Along Haile Gold Mine Road (Loc 3)	52	63.1	63.1
Corner of Snowy Owl and Gold Mine Highway (House SO/GMH)	50	63.2	63.2
Houses along Snowy Owl Road (HouseSOR)	53	65.1	65.1
Gold Mine Highway and Route # 265 (GMH-Rt265)	46	62.4	62.4
Corner of Snowy Owl Road and State Road 219 (SOR219)	52	59.2	59.2
5099 Gold Mine Highway (5099GMH)	43	94.0	94.0
Intersection Estridge Ave with State Road 29-204 (SR29/204)	42	93.4	93.4

Table 10. Change (increase) to existing ambient noise level and human reaction to increase based on existing L-Peak ambient levels

Locations for which STS measured ambient sound levels	Change in Ambient	Human Reaction to increase in ambient
Haile Baptist Church (HBC)	0	<i>Unnoticed</i>
Kershaw Industrial Park (KIP)	0	<i>Unnoticed</i>
*Corner of Gold Mine Highway and Haile Gold Mine Road (Loc 1)	0	<i>Unnoticed</i>
*Along Haile Gold Mine Road (Loc 3)	0	<i>Unnoticed</i>
Corner of Snowy Owl and Gold Mine Highway (House SO/GMH)	0	<i>Unnoticed</i>
Houses along Snowy Owl Road (House SOR)	0	<i>Unnoticed</i>
Gold Mine Highway and Route # 265 (GMH-Rt265)	0	<i>Unnoticed</i>
Corner of Snowy Owl Road and State Road 219 (SOR219)	0	<i>Unnoticed</i>
5099 Gold Mine Highway (5099GMH)	0	<i>Unnoticed</i>
Intersection Estridge Ave with State Road 29-204 (SR29/204)	0	<i>Unnoticed</i>

Haile Gold Mine Property Boundary Locations – Entire Mining Operation

Table 11 below lists the projected L_{\max} sound levels to Haile Gold Mine Property boundary receptor locations. The projected noise levels represent the maximum noise levels resulting from the combined 51 noise sources proposed at the Haile Gold Mine. These sound level projections represent a worst case in that all noise sources are operating at the same time. The computer model output for this analysis is included in Appendix G.

Table 11. Projected L_{max} noise levels to Haile Gold Mine Property Boundary

Receptor Location	Projected L_{max} dBA
Property Boundary 11	45
Property Boundary 12	55
Property Boundary 13	51
Property Boundary 14	51
Property Boundary 15	56
Property Boundary 16	46
Property Boundary 17	53
Property Boundary 18	42
Property Boundary 19	42
Property Boundary 20	49
Property Boundary 21	52
Property Boundary 22	52

Haile Gold Mine Property Boundary Locations – Ore Processing Equipment

For property boundary noise receptor locations located in Lancaster County, the projected L_{max} noise levels resulting from the operation of ore processing equipment were directly compared to the Lancaster County # 309 previously summarized in this report. The projected noise levels in eight octave bands represent the maximum noise levels resulting from the operation of proposed ore processing equipment at the Haile Gold Mine. The computer model output for this analysis is included in Appendix H. This analysis was conducted for the most restrictive schedule of nighttime Non-Residential and Residential Lot Line Limits. The results of this analysis are presented in Tables 12 and 13 below.

Table 12. Projected noise compared to Lancaster County Ordinance # 309 for non residential nighttime lot line limits

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Non Residential Lot Line Limit dB	66.9	59.0	54.8	48.9	41.5	39.5	37.3	34.3
Property Boundary 11	51	37	35	17	1	0	0	0
Property Boundary 12	55	41	40	23	2	0	0	0
Property Boundary 13	50	36	34	16	5	0	0	0
Property Boundary 14	46	31	28	7	5	0	0	0
Property Boundary 15	47	33	31	11	5	0	0	0
Property Boundary 16	46	31	29	8	5	0	0	0
Property Boundary 17	56	42	41	24	4	0	0	0
Property Boundary 18	46	31	29	8	5	0	0	0
Property Boundary 19	46	32	29	9	5	0	0	0
Property Boundary 20	55	42	41	24	1	0	0	0
Property Boundary 21-Gregory (561)	52	37	36	18	5	0	0	0
Property Boundary 22-Gregory (565)	52	38	36	18	5	0	0	0
Rec 1-Haile Baptist Church (HBC)	51	37	35	17	0	0	0	0
Rec 5-Houses Corner SO-GMH	57	43	42	25	4	0	0	0
Rec 6-Houses along SOR	61	48	47	31	10	1	0	0
Rec 7-GMH-Rt 265	52	38	36	18	5	0	0	0
Rec 8-SOR/R219	56	42	41	25	3	0	0	0
Rec 9-5099 GMH	48	34	31	12	5	1	0	0

Table 13. Projected noise compared to Lancaster County Ordinance # 309 for residential nighttime lot line limits

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Residential Lot Line Limit dB	62.9	49	41.8	35.9	32.5	29.5	27.3	19.3
Property Boundary 11	51	37	35	17	1	0	0	0
Property Boundary 12	55	41	40	23	2	0	0	0
Property Boundary 13	50	36	34	16	5	0	0	0
Property Boundary 14	46	31	28	7	5	0	0	0
Property Boundary 15	47	33	31	11	5	0	0	0
Property Boundary 16	46	31	29	8	5	0	0	0
Property Boundary 17	56	42	40	24	4	0	0	0
Property Boundary 18	46	31	29	8	5	0	0	0
Property Boundary 19	46	32	29	9	5	0	0	0
Property Boundary 20	55	42	40	24	1	0	0	0
Property Boundary 21	52	37	36	18	5	0	0	0
Property Boundary 22	52	38	36	18	5	0	0	0
Rec 1-Haile Baptist Church (HBC)	51	37	35	17	0	0	0	0
Rec 5-Houses Corner SO-GMH	57	43	40	25	4	0	0	0
Rec 6-Houses along SOR	61	48	40	31	10	1	0	0
Rec 7-GMH-Rt 265	52	38	36	18	5	0	0	0
Rec 8-SOR/R219	56	42	40	25	3	0	0	0
Rec 9-5099 GMH	48	34	31	12	5	1	0	0

One Mile Radius Locations

For noise receptor locations located within a one mile radius of the proposed mine, the projected L_{max} noise levels are reported in Table 14 below. The projected noise levels represent the maximum noise levels resulting from the operation of 51 noise sources proposed at the Haile Gold Mine. Again for this analysis the model assumed all 51 noise sources were operating at the same time. The computer model output for this analysis is included in Appendix I.

Table 14. Projected noise levels to receptor locations in a one mile radius of the proposed Haile Gold Mine Operation

Receptor Location	Projected Lmax dBA
One Mile Radius-23	40
One Mile Radius-24	43
One Mile Radius-25	45
One Mile Radius-26	44
One Mile Radius-27	45
One Mile Radius-28	43
One Mile Radius-29	42
One Mile Radius-30	40
One Mile Radius-31	39

Discussion

In general, sound is defined as what people hear every day. Noise, as opposed to sound, can be defined as unwanted sound. When lands adjoining an existing or proposed facility contain residential, commercial, or recreational land uses, noise is likely to be a concern to proximal land owners. Several environmental factors determine the level, or perceptibility, of sound at a given receptor location. The most important of these factors are the distance from the sound source to the receptor, the surrounding terrain (elevation), and the existing background or ambient noise levels. Characteristics of sound are also important factors in determining perception and impact. The amplitude or loudness usually measured as dBA, the nature or pattern of the sound, impulse or maximum, and the duration of the sound. Vibra-Tech considered all of these factors in this noise impact assessment.

The distance between the noise source(s) and the receptor locations is the most compelling factor in the outcome of the impact analysis. The decrease in sound level over distance normally follows the inverse square law. At distances of fifty (50) feet or greater from a sound source, every doubling of distance produces a 6 dBA reduction in sound. Therefore, a sound of 70 dBA at 50 feet would have a sound level of approximately 64 dBA at 100 feet. At 200 feet the sound level would be 58 dBA. For this project, the closest distance from any noise source to any receiver was approximately 970 feet.

Measuring or projecting the maximum sound pressure level at a receptor location can be an appropriate approach to impact assessment. Most humans find a sound level of 60 to 70 dBA as being a condition of significant noise impact (EPA 550/9-79-100, Nov 1978). For most non-industrial areas, ambient sound levels should not be increased by 6 dBA or more at any receptor location (NYS Environmental Procedures Manual, Chapter 3.1, Environmental Analysis Bureau, DOT, 1998). An increase in ambient of 6 dBA or more may cause complaints.

Futhermore, the addition of any noise source in a non-industrial setting should not raise the background level above a maximum of 65 dBA during daytime hours. This would be considered the upper end limit since 65 dBA allows for undisturbed speech at a distance of approximately 3 feet.

In cases where a noise ordinance or performance standard is presented using octave band limits, the limits are usually broken down into limits within center frequencies from 63 to 8000 Hz. This was the case for Lancaster County Ordinance # 309. For this standard, a linear (non weighted) dB limit within each octave band was given.

Conclusion

Based on the human perception and noise impact assessment performed for the proposed Haile Gold Mine operation, no significant change to existing ambient conditions could be determined for noise receptor locations when comparing the projected L_{max} sound levels to ambient sound levels. These results appear in Tables 7 and 8. For these locations included in the STS ambient studies, the analysis indicated less than a 5 dBA increase in ambient sound levels which corresponds to a human perceptibility of unnoticed to tolerable.

For property boundary locations within Lancaster County, for which the Lancaster Noise Ordinance # 309 may be applied to ore processing equipment, the projected noise levels at the property boundary comply to the ordinance. The projected noise levels in a one mile radius of the mine range from 39 to 45 dBA.

All of the above described results were obtained when performing the sound level projection analysis and impact assessment under the worst case condition of all fifty one (51) noise sources operating simultaneously including the operation of ore processing equipment. Under normal operating conditions of the proposed mine, it is probable that all 51 noise sources used in this analysis would not be running simultaneously. As the pit and bench areas of the mine become developed, the elevation of mobile and drilling equipment will be lowered, and noise levels may be attenuated further due to the benefit of developed berms. As overburden storage areas (OSA's) continue to develop, the OSA elevation may increase thus providing addition berms.

Respectfully submitted,
VIBRA-TECH ENGINEERS, INC.

Sincerely,
Vibra-Tech Engineers, Inc.

Jonathan A. Ferdinand

Jonathan A. Ferdinand
Vibration and Sound Analyst

Douglas Rudenko

Douglas Rudenko, P.G
Vice President
Northeast Regional Manager

APPENDIX A

Soundcalc Reference Noise Source Data and Coordinates

Source	Number	X	Y	Z		Total dBA	ref dist-ft	31.5	63	125	250	500	1000	2000	4000	8000	16000
Primary crusher	1	2141378	579767	548		95.3	3.3	79	88	88	93	83	73	62	48	40	35
SAG mill motor	2	2141312	580715	556		95.3	3.3	79	88	88	93	83	73	62	48	40	35
Ball mill motor	3	2141288	580813	556		95.3	3.3	79	88	88	93	83	73	62	48	40	35
Regrind mill motors	4	2141228	580996	559		80.2	3.3	72	76	77	63	60	53	45	41	35	30
Regrind mill motors	5	2141224	581014	559		80.2	3.3	72	76	77	63	60	53	45	41	35	30
Regrind mill motors	6	2141219	581031	559		80.2	3.3	72	76	77	63	60	53	45	41	35	30
Regrind mill motors	7	2141209	580991	559		80.2	3.3	72	76	77	63	60	53	45	41	35	30
Regrind mill motors	8	2141204	581009	559		80.2	3.3	72	76	77	63	60	53	45	41	35	30
Regrind mill motors	9	2141200	581026	559		80.2	3.3	72	76	77	63	60	53	45	41	35	30
Mobile Equipment				Best	Worst												
Ramona's OSA-ROSA																	
ROSA Cat 777 HT	10	2135000	571900	425	680	84	50	68	76	78	82	73	63	53	40	35	30
ROSA Cat 777 HT	11	2134950	571850	425	680	84	50	68	76	78	82	73	63	53	40	35	30
ROSA Cat 777 HT	12	2134900	571800	425	680	84	50	68	76	78	82	73	63	53	40	35	30
ROSA D9T Doz	13	2134850	571750	425	680	87	50	68	76	78	82	73	63	53	40	35	30
ROSA D9T Doz	14	2134800	571700	425	680	87	50	68	76	78	82	73	63	53	40	35	30
ROSA D9T Doz	15	2134750	571650	425	680	87	50	68	76	78	82	73	63	53	40	35	30
ROSA BU Alarm	16	2134700	571600	425	675	112	4	80	85	100	112	88	90	60	45	41	30
Johnny's PAG-JP																	
JP Cat 777 HT	17	2139000	578200	525	680	84	50	68	76	78	82	73	63	53	40	35	30
JP Cat 777 HT	18	2138950	578150	525	680	84	50	68	76	78	82	73	63	53	40	35	30
JP Cat 777 HT	19	2138900	578100	525	680	84	50	68	76	78	82	73	63	53	40	35	30
JP D9T Doz	20	2138850	578050	525	680	87	50	68	76	78	82	73	63	53	40	35	30
JP D9T Doz	21	2138800	578000	525	680	87	50	68	76	78	82	73	63	53	40	35	30
JP D9T Doz	22	2138750	577950	525	680	87	50	68	76	78	82	73	63	53	40	35	30
JP BU Alarm	23	2139010	578210	525	680	112	4	80	85	100	112	88	90	60	45	41	30
Hayworth's OSA-HOSA																	
HOSA Cat 777 HT	24	2143400	577400	500	700	84	50	68	76	78	82	73	63	53	40	35	30
HOSA Cat 777 HT	25	2143350	577350	500	700	84	50	68	76	78	82	73	63	53	40	35	30
HOSA Cat 777 HT	26	2143300	577300	500	700	84	50	68	76	78	82	73	63	53	40	35	30
HOSA D9T Doz	27	2143250	577250	500	700	87	50	68	76	78	82	73	63	53	40	35	30
HOSA D9T Doz	28	2143200	577200	500	700	87	50	68	76	78	82	73	63	53	40	35	30
HOSA D9T Doz	29	2143150	577150	500	700	87	50	68	76	78	82	73	63	53	40	35	30
HOSA BU Alarm	30	2143410	577410	500	690	112	4	80	85	100	112	88	90	60	45	41	30
James' OSA-JOSA																	
JOSA Cat 777 HT	31	2143700	580600	525	630	84	50	68	76	78	82	73	63	53	40	35	30
JOSA Cat 777 HT	32	2143650	580550	525	630	84	50	68	76	78	82	73	63	53	40	35	30
JOSA Cat 777 HT	33	2143600	580500	525	630	84	50	68	76	78	82	73	63	53	40	35	30
JOSA D9T Doz	34	2143550	580450	525	630	87	50	68	76	78	82	73	63	53	40	35	30
JOSA D9T Doz	35	2143500	580400	525	630	87	50	68	76	78	82	73	63	53	40	35	30
JOSA D9T Doz	36	2143450	580350	525	630	87	50	68	76	78	82	73	63	53	40	35	30
JOSA BU Alarm	37	2143710	580610	525	630	112	4	80	85	100	112	88	90	60	45	41	30
Drills																	
Champion Pit-CP																	
CP-Drill 1	38	2133700	575500	460		94	4	63	85	93	83	75	70	60	50	40	30
CP-Drill 2	39	2133650	575450	460		94	4	63	85	93	83	75	70	60	50	40	30
CP-Drill 3	40	2133600	575400	460		94	4	63	85	93	83	75	70	60	50	40	30
Small Pit																	
SP-Drill 1	41	2134800	574000	480		94	4	63	85	93	83	75	70	60	50	40	30
SP-Drill 2	42	2134750	573950	480		94	4	63	85	93	83	75	70	60	50	40	30
SP-Drill 3	43	2134700	573900	480		94	4	63	85	93	83	75	70	60	50	40	30
Snake Pit-SKP																	
SKP-Drill 1	44	2142100	575600	420		94	4	63	85	93	83	75	70	60	50	40	30
SKP-Drill 2	45	2142050	575550	420		94	4	63	85	93	83	75	70	60	50	40	30
SKP-Drill 3	46	2142000	575500	420		94	4	63	85	93	83	75	70	60	50	40	30
Ledbetter Pit-LP																	
LP-Drill 1	47	2139600	576900	440		94	4	63	85	93	83	75	70	60	50	40	30
LP-Drill 2	48	2139550	576850	440		94	4	63	85	93	83	75	70	60	50	40	30
LP-Drill 3	49	2139500	576800	440		94	4	63	85	93	83	75	70	60	50	40	30
TSF-Cat 777 HT	50	2137500	585300	620		84	50	68	76	78	82	73	63	53	40	35	30
TSP-Cat D9 Doz	51	2137450	585250	620		87	50	68	76	78	82	73	63	53	40	35	30

APPENDIX B

Site Map of Haile Gold Mine indicating Noise Source and Receptor Locations

Noise Source and Receptor Locations

Key: Receptors

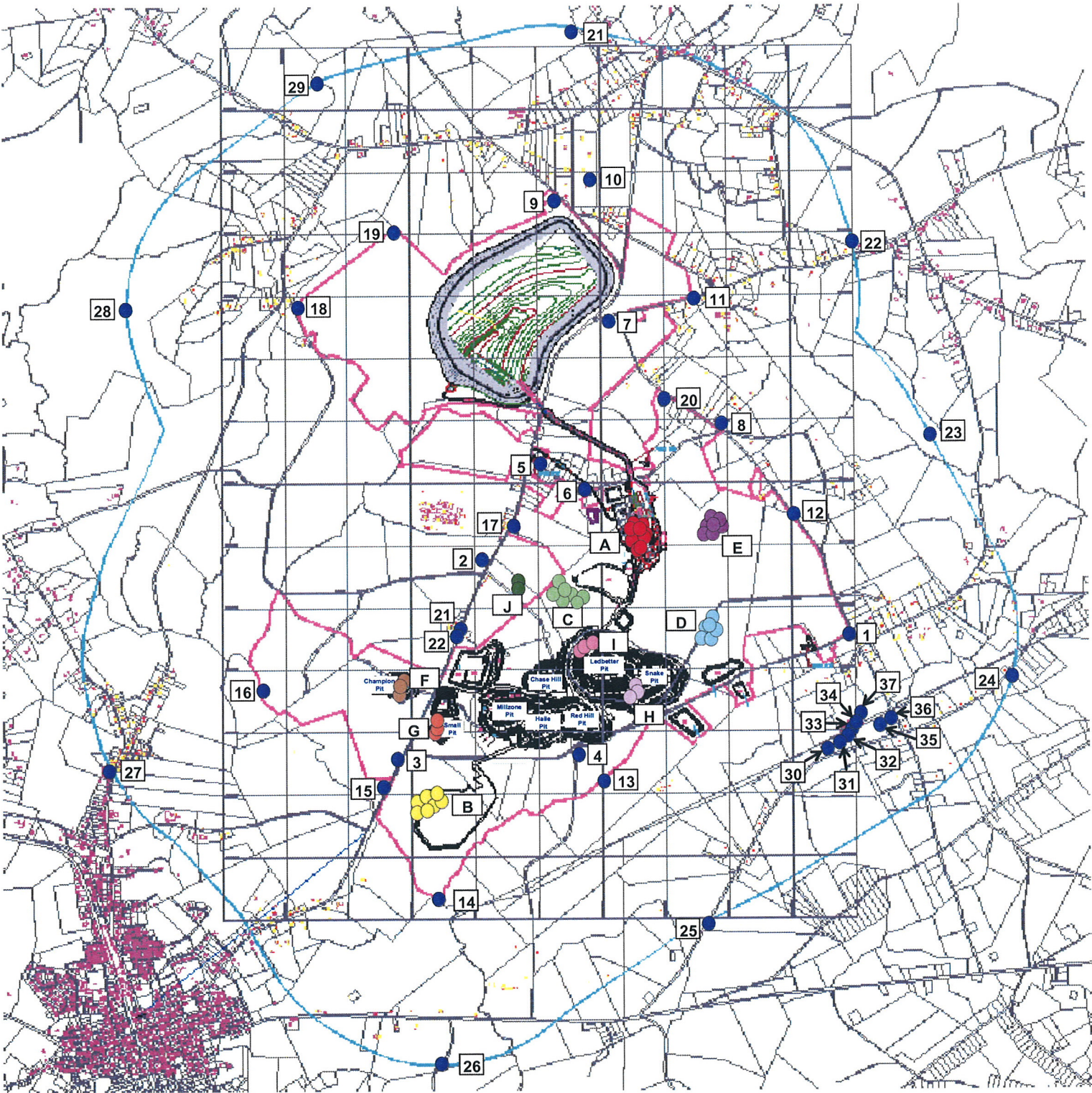
● - Receptor Locations

1. Haile Baptist Church
2. Kershaw Industrial Park
3. Loc1-GMH-GMR
4. Loc3-SO-GMH
5. Houses-Corner SO-GMH
6. Houses-Along SOR
7. GMH-Rt265
8. SOR-R219
9.5099 GMH
10. SR29-204

11-22. Property Boundary Locations

23-31. One-Mile Boundary Locations

32-39. Kershaw County Locations



Key: Noise Source

A. Stationary Sources ●

1. Top of crusher dump hopper
2. SAG mill motor
3. Ball mill motor
4. Re grind mill motors - 1
5. Re grind mill motors - 2
6. Re grind mill motors - 3
7. Re grind mill motors - 4
8. Re grind mill motors - 5
9. Re grind mill motors - 6

B. Mobile Equipment ●

10. ROSA Cat 777 HT 1
11. ROSA Cat 777 HT 2
12. ROSA Cat 777 HT 3
13. ROSA D9T Doz 1
14. ROSA D9T Doz 2
15. ROSA D9T Doz 3
16. ROSA BU Alarm

C. Johnny's PAG-JP ●

17. JP Cat 777 HT 1
18. JP Cat 777 HT 2
19. JP Cat 777 HT 3
20. JP D9T Doz 1
21. JP D9T Doz 2
22. JP D9T Doz 3
23. JP BU Alarm

D. Hayworth's OSA-HOSA ●

24. HOSA Cat 777 HT 1
25. HOSA Cat 777 HT 2
26. HOSA Cat 777 HT 3
27. HOSA D9T Doz 1
28. HOSA D9T Doz 2
29. HOSA D9T Doz 3
30. HOSA BU Alarm

E. James' OSA-JOSA ●

31. JOSA Cat 777 HT 1
32. JOSA Cat 777 HT 2
33. JOSA Cat 777 HT 3
34. JOSA D9T Doz 1
35. JOSA D9T Doz 2
36. JOSA D9T Doz 3
37. JOSA BU Alarm

F. Champion Pit Drills ●

38. CP-Drill 1
39. CP-Drill 2
40. CP-Drill 3

G. Small Pit Drills ●

41. SP-Drill 1
42. SP-Drill 2
43. SP-Drill 3

H. Snake Pit Drills ●

44. SKP-Drill 1
45. SKP-Drill 2
46. SKP-Drill 3

I. Ledbetter Pit ●

47. LP-Drill 1
48. LP-Drill 2
49. LP-Drill 3

J. TSF ●

50. TSF-Cat 777 Ht
51. TSF-Cat D9 Doz

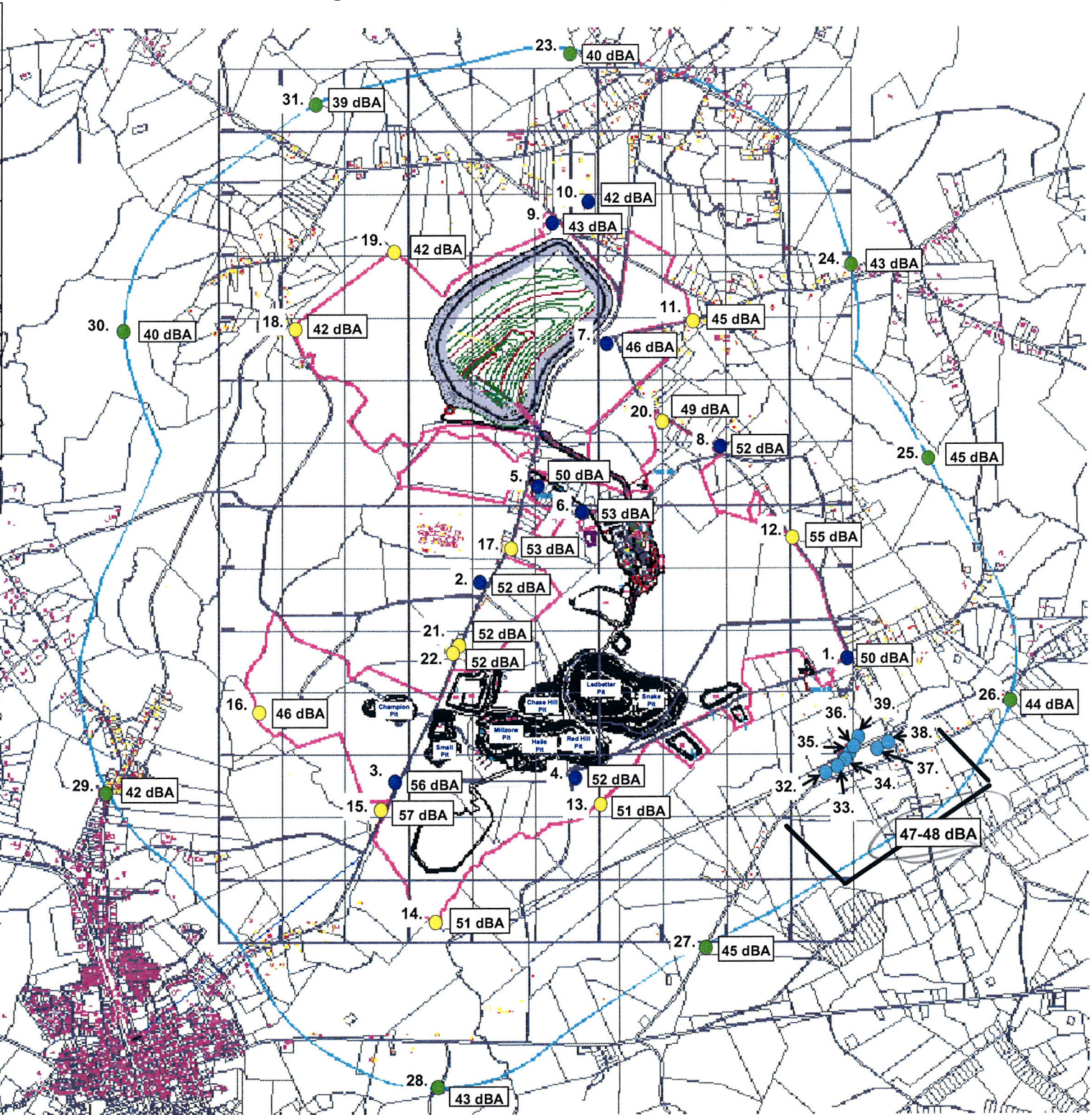
APPENDIX C

Site Map of Haile Gold Mine and Surrounding Area indicating Projected Lmax Noise Levels

Projected Sound Levels (dBA)

Key: Receptors	
● - Receptor Locations	
1. Haile Baptist Church	50
2. Kershaw Industrial Park	52
3. Loc1-GMH-GMR	56
4. Loc3-SO-GMH	52
5. Houses-Corner SO-GMH	50
6. Houses-Along SOR	53
7. GMH-Rt265	46
8. SOR-R219	52
9.5099 GMH	43
10. SR29-204	42

Key: Property Boundary Receptors	
● - Receptor Locations	
Location #	
11.	45
12.	55
13.	51
14.	51
15.	57
16.	46
17.	53
18.	42
19.	42
20.	49
21.	52
22.	52



Key: One-Mile Radius Boundary Receptors	
● - Receptor Locations	
Location #	
23.	40
24.	43
25.	45
26.	44
27.	45
28.	43
29.	42
30.	40
31.	39

Key: Kershaw County Receptors	
● - Receptor Locations	
Location #	
32.	48
33.	48
34.	48
35.	48
36.	48
37.	47
38.	47
39.	48

APPENDIX D

South Carolina, County of Lancaster Ordinance # 309

PART I - THE CODE
APPENDIX B - UNIFIED DEVELOPMENT ORDINANCE
CHAPTER 4. - CONDITIONAL AND SPECIAL EXCEPTION USES

CHAPTER 4. - CONDITIONAL AND SPECIAL EXCEPTION USES

- Section 4.1 - Purpose for conditional uses.
- Section 4.1.1 - How to measure separation requirements.
- Section 4.1.2 - Adult day care.
- Section 4.1.3 - Bed and breakfast.
- Section 4.1.4 - Business uses (any non-single-family use) allowed in the R-45A and R-45B Districts.
- Section 4.1.5 - Child day care.
- Section 4.1.6 - Commercial kennels.
- Section 4.1.7 - Convenience centers.
- Section 4.1.8 - Home occupations.
- Section 4.1.9 - Hotel/motel.
- Section 4.1.10 - Livestock auction houses.
- Section 4.1.11 - Motor vehicle related businesses.
- Section 4.1.12 - Manufactured homes.
- Section 4.1.13 - Manufactured home parks.
- Section 4.1.14 - Manufactured home storage lots.
- Section 4.1.15 - Manufactured home subdivisions.
- Section 4.1.16 - Manufacturing/processing uses.
- Section 4.1.17 - Mini-warehouses.
- Section 4.1.18 - Private or commercial horse stables.
- Section 4.1.19 - Recycling facilities, convenience centers, and resource recovery facilities.
- Section 4.1.20 - Site built or modular single-family detached house located in the commercial, industrial or multiple-family districts.
- Section 4.1.21 - Reserved.
- Section 4.1.22 - Stockyards, slaughter houses, commercial poultry houses, commercial meat production centers and swine lots.
- Section 4.1.23 - Temporary dependent care residences.
- Section 4.1.24 - Temporary emergency, construction, or repair residences.
- Section 4.1.25 - Temporary structures other than residences.
- Section 4.1.26 - Wireless communications transmission facilities.
- Section 4.1.27 - Motor vehicle dealer (used).
- Section 4.1.28 - Body piercing establishment, body branding establishment, or tattoo parlors.
- Section 4.1.29 - Mining and extraction operations.
- Sec. 4.1.30 - Golf courses.
- Sec. 4.1.31 - Livestock production.
- Sec. 4.1.32. - Wastewater treatment facilities.
- Section 4.2 - Purpose for special exceptions.
- Section 4.2.1 - Automotive wrecking, and/or junk, and/or salvage yards.
- Section 4.2.2 - Adult uses.
- Section 4.2.2.1 - Classifications.
- Section 4.2.2.2 - Location.
- Section 4.2.3 - Construction, demolition, and land clearing debris landfills.
- Section 4.2.4 - Reserved.
- Section 4.2.5 - Motorized race and testing tracks.
- Section 4.2.6 - Pistol, rifle or skeet range.
- Section 4.2.7 - Sanitary landfills.
- Section 4.2.8 - Solid waste storage and transfer facilities, waste tire treatment sites, and composting facilities.
- Section 4.2.9 - Special events.
- Section 4.2.10 - Video game machine establishments.
- Section 4.2.11. - Turkey shoots.

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CHAPTER 4. - CONDITIONAL AND SPECIAL EXCEPTION USES

Section 4.2.12 - Solid waste processing facilities.
Section 4.2.13 - Waste tires processing facilities (recycling).
Section 4.2.14 - Composting facilities.

Section 4.1 - Purpose for conditional uses.

Due to the nature and potential impact of uses listed in this portion of this chapter, such uses shall only be allowed within Lancaster County if all of the listed conditions pertaining to each use are met. If all of the listed conditions pertaining to each use are met, no further review is required. Variances from these minimum requirements shall not be approved unless the applicant can demonstrate a hardship would occur if the ordinance is applied to the site as written.

Section 4.1.1 - How to measure separation requirements.

The distance is measured by following a straight line from the closest point of the lot line of the lot which contains the use which the conditional or special exception use is to be separated from to the closest point where the proposed conditional or special exception use is to be located on the site.

For example: A slaughter house is to be located at least 2,640 feet from a religious institution. See diagram below.

Section 4.1.2 - Adult day care.

Adult day care, provided that:

1. No sign exceeding four square feet in area shall be permitted and all signs shall be non-illuminated; and
2. The lot size shall be no less than 30,000 square feet; and
3. The construction and operation of such facilities shall comply with all applicable federal, state or local codes.
4. If located in an R-45A or R-45B district the requirements of section 4.1.4 apply to this use.

Section 4.1.3 - Bed and breakfast.

1. The bed and breakfast shall be operated in a principal structure constructed before the effective date of this ordinance and not in any accessory structure.
2. No exterior additions or alterations shall be made for the express purpose of creating or maintaining a bed and breakfast.
3. The owner of the bed and breakfast or full time manager shall reside in the structure.
4. The use of the dwelling unit for the bed and breakfast shall be clearly incidental and subordinate to its use as a principal residence.
5. The structure must contain one full bathroom for the exclusive use of the owner or resident manager and other members of the immediate household.
6. The guest rooms shall be offered primarily to transient persons for rental or lease by the day or

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week. Maximum length of stay is limited to 14 days in any 30-day period of time. The property owner or full time manager shall keep a current guest register including names, addresses, and dates of occupancy of all guests. These records shall be available for inspection by the building and zoning official.

7. For bed and breakfast establishments, one off-street parking space for the owner/manager and one space per guest room shall be required. The required off-street parking may be located on the lot containing the bed and breakfast provided that it is not located in the front yard.

8. Not more than one sign advertising the existence of a bed and breakfast operation may be erected on the lot where such use is located. No side of this sign may exceed four square feet in surface area. The sign may not be internally illuminated.

Section 4.1.4 - Business uses (any non-single-family use) allowed in the R-45A and R-45B Districts.

Business uses allowed in these districts shall meet the following requirements:

1. Property is located at the intersection of two roads. One road shall be part of the state highway system.
2. No business use shall be allowed on a lot having frontage on a local street.
3. Commercial buildings shall contain no more than 6,000 square feet of gross floor area. Exception: Retail—"Food store" can contain up to 12,000 square feet of gross floor area.
4. A Type 2 buffer yard shall be provided along the side and rear property lines.
5. The requirements of section 12.2.2, street yard landscaping shall be met.

Section 4.1.5 - Child day care.

Child day care, provided that:

1. When a center is licensed for six to 29 children, inclusive, there shall be 75 square feet per child of outdoor play area for the total number of children for which the center is licensed. In addition, the total number of children on the playground shall not exceed the number the space will accommodate at 75 square feet per child;

When a center is licensed for thirty 30 or more children, there shall be 75 square feet per child of outdoor play area for a least one-half of the total number for which the center is licensed, provided that the minimum amount of space on the outdoor play area must be enough to accommodate at least 30 children. In addition, the total number of children on the playground shall not exceed the number the space will accommodate at 75 square feet per child;

2. The entire play area is enclosed by a fence having a minimum height of at least four feet and constructed in such a manner that maximum safety to the children is ensured; and
3. No outside sign in excess of four square feet in area shall be permitted. The sign shall be non-illuminated; and

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4. The construction and operation of such facilities shall comply with all applicable federal, state or local codes; and
5. An off-street dropoff/pickup area shall be provided.
6. The center shall not have access to a local road.
7. If located in an R-45A or R-45B District the requirements of section 4.1.4 apply to this use.

Section 4.1.6 - Commercial kennels.

Commercial kennels shall be sited to meet the following requirements:

1. Such uses shall be set back a minimum of 100 feet (measured in a straight line) from the property line on which the use is located.
2. Such uses shall be located a minimum of 500 feet (measured structure to structure) from any religious institution, school, historical place, park, residential use, or day care center.
3. To minimize any potential negative impacts from this type of use, noise abatement techniques shall be used in the construction of such facilities.
4. A Type 2 buffer yard, as defined in Chapter 12, shall be installed along all property lines. The buffer yard shall contain plants which, when mature, shall buffer all parts of the site from public view. All plants used for the buffer yard shall be evergreens.
5. If located in an R-45A or R-45B District the requirements of section 4.1.4 shall apply.

Section 4.1.7 - Convenience centers.

1. *Reserved.*
2. Facilities shall be located a minimum of 500 feet away from any religious institution, school, historical place, public park, day care center, or existing residential use or district.
3. All buildings and structures involved in the operation of this type of facility shall be a minimum of 75 feet from the centerline of any public road. All recyclable materials shall be kept behind all buildings and structures involved in the operation. Such parcels shall have direct access to a collector or arterial street. Access roads/easements shall maintain a minimum travel surface of 18 feet and have a width of 30 feet at the entrance intersection with a collector or arterial street so as to accommodate truck traffic.
4. Facilities shall be screened by a Type 4 buffer yard, as defined in Chapter 12. Where the required buffer yard is to be installed adjacent to a residential district or use, all plants used to meet this requirement shall be evergreens.
5. All exterior storage of material shall be in sturdy containers or enclosures which are secured and maintained in good condition, or shall be baled or palletized. Storage containers for flammable material shall be constructed of nonflammable material. Materials such as woodchips or other large bulky items shall be exempt from having to be placed in containers or enclosures.
6. Sites shall be maintained free of litter and all other undesirable materials, shall be cleaned of loose debris on a daily basis, and shall be secured from unauthorized entry and removal of materials when attendants are not present.

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7. Space shall be provided on-site for customers to circulate, park and deposit recyclable materials and solid waste.
8. Donation areas shall be kept free of litter and any other undesirable material. The containers shall be clearly marked to identify the type of material that may be deposited. The facility shall display a notice stating that no material shall be left outside the recycling containers.
9. All applicable permits shall be obtained from the SCDHEC and any other permitting agency.

(Ord. No. 1073, § 1, 12-29-10)

Section 4.1.8 - Home occupations.

Home occupations shall comply with the following requirements:

1. Shall not have an adverse impact on the surrounding neighborhood.
2. Shall not display goods, stock in trade or other commodity outside of a fully enclosed structure.
3. The on-site retail sales of goods not produced on-site is prohibited.
4. No more than one (1) person who does not reside on the site shall be employed in the business.
5. The operation shall not create any objectionable noise, fumes, odor, dust or electrical interference.
6. No more than 25 percent of the total gross floor area of the residential building shall be used for the home occupation or more than 1,000 square feet of gross floor area, (whichever is less).
7. Can only use vehicles which are primarily used as passenger vehicles in connection with the home occupation.

Section 4.1.9 - Hotel/motel.

Motels and hotels, provided that:

1. The lot size is a minimum of one acre;
2. The sole means of ingress and egress shall be via an arterial road;
3. The property shall have a minimum two-hundred foot (200) frontage on an arterial road;
4. Any building on the site must be a minimum of two hundred (200) feet from any residential district; and
5. When adjacent to residentially used or zoned property, outdoor lighting is required to be installed so that light shall not shine or reflect directly onto the adjacent property.
6. When adjacent to residentially used or zoned property a Type "3" buffer yard shall be installed along all property lines abutting a residentially used or zoned property.

Section 4.1.10 - Livestock auction houses.

Livestock auction houses shall be sited a minimum of 500 feet (measured in a straight line) from the property line on which the use is located.

Section 4.1.11 - Motor vehicle related businesses.

1. All businesses which work on motor vehicles and/or store motor vehicles on site for any period of time, such as a junkyards, garages, wrecking services, etc. shall be required to be screened from public view by installing a Type 2 Buffer yard around the perimeter of all the property which is between the building on the site and the street right-of-way from which the site has its main access. If there is no building on the site, the same type fence shall be required to be installed in a manner which shall completely screen all vehicles from the street right-of-way. This provision shall not apply to new or used car dealerships.

2. The side and rear property lines shall be screened as is deemed appropriate by the staff of the building and zoning department. For example, if all the adjoining property is vacant, no fence would be required. However, if these sites were developed for residences at a later time, the owner of the property would be required to install the appropriate fencing prior to the residence being occupied.

Section 4.1.12 - Manufactured homes.

The setup, location, and movement of a manufactured home not in a manufactured home park shall meet the following requirements:

1. As used in this ordinance, the term "mobile home" or "manufactured home" shall be interpreted to mean a vehicle or structure that is designed to be movable on its own chassis for conveyance on public thoroughfares and designed without a permanent foundation. A manufactured home may consist of one or more components that can be disassembled for towing purposes or two or more units that can be towed separately, but designed to be attached as one (1) integral unit. All manufactured homes produced since June 15, 1976, must be inspected by the Department of Housing and Urban Development during the manufacturing process and display an emblem of approval on the manufactured home. No manufactured home produced before June 15, 1976, shall be brought into and located in the county. The manufactured home dimensions shall be a minimum of 32 feet in length and eight feet in width. Placement of this type of dwelling/residence on a permanent foundation does not constitute a change in its classification. For the purpose of this ordinance, a manufactured home used for business purposes or classrooms are subject to the requirements of subsection 6. of this section.

2. Scope and jurisdiction.

a. Sworn law enforcement personnel of the county shall assist the building and zoning department in the enforcement of all applicable requirements of this section and ordinance upon reasonable request and notification.

b. Upon notice from the building and zoning official, placement of a manufactured home contrary to the provisions of this section shall be immediately ceased. Such notice shall be in writing and shall be transmitted to the mover of the manufactured home in violation. Notice shall state the violation and the conditions under which the violation shall be corrected. Written notice shall be sufficient if mailed by registered mail, hand delivered, or accepted by an agent or relative of the owner of the manufactured home in violation.

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- c. It shall be unlawful for any public utility to provide service to any manufactured home where a permit is required under this ordinance prior to the issuance of required permit(s) or to maintain any such service upon notification by the building and zoning official that such violation was made against the provisions of this ordinance. This service restriction includes temporary connections for installation purposes.
3. Permit administration.
- a. It shall be unlawful for any person to place a manufactured home on a lot without filing an application with the building and zoning department and obtaining the necessary permit. Each application for a permit shall be made on a form required by the building and zoning department. Part of this process includes a site inspection and a verification of the assigned 911 address. Such a permit shall be valid for six months from the day it is issued.
- b. The building and zoning department shall make every reasonable effort to assist an applicant in completing the application forms; however, the applicant for such a permit is fully responsible for supplying and entering complete and accurate information on the application forms. If the application is deemed incomplete, inaccurate, or nonconforming to the provisions of this or other pertinent ordinances, the building and zoning department may reject such application in writing and indicate what action the applicant must take to comply with these regulations.
- c. Upon approval of a manufactured home permit involving placement, the building and zoning department shall issue a placement decal or card which shall be permanently affixed to the manufactured home by the owner. Upon approval of a manufactured home involving movement within or from Lancaster County, the building and zoning department shall issue a moving permit which shall be conspicuously displayed on the rear of the manufactured home while it is being moved.
4. Permit fees.
- a. No permit shall be issued by the building and zoning department until the appropriate fee for the placement/setup/moving of any manufactured home or the appropriate fee for moving any manufactured home, out of the county, has been paid in full.
- b. When, as a result of incomplete applications, violations, or errors of permit holder/applicant, additional inspections must be performed, the permit holder/applicant shall pay an additional fee of \$25.00 for each additional inspection thereafter.
- c. Where any activity regulated by this ordinance is commenced prior to issuance of the required permits, the applicable permit fee shall be doubled.
- d. The Lancaster County School District shall be exempt from paying the fees established by this subsection only.
- e. If a manufactured home is located on a parcel without meeting all the regulations contained in this ordinance, then the mover of the manufactured home (not the property owner) shall be fined accordingly and it shall be the responsibility of the mover to correct the situation. Such a mover may also be fined for any other reason the building and zoning official believes is the responsibility of the mover.

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5. Requirements.

- a. Such structures shall be occupied as residences unless otherwise specified by this ordinance.
- b. One (1) manufactured home and one (1) single-family detached home shall be allowed to occupy the same lot provided one (1) of the homes shall be owner occupied and each home shall have separate and independent utility (i.e., electric, gas, water, sewer) facilities situated on a minimum lot size of 1.5 acres (65,340 square feet). One of the two (2) units shall be maintained as an owner occupied unit and only one (1) of these two (2) structures shall be a manufactured home. At no time shall both units become rental units.
- c. The manufactured home shall not be located within the required yard space of the single-family dwelling and at least 20 feet from the other dwelling or manufactured home.
- d. All tires and rims shall be removed from the manufactured home. The only exception to this requirement shall be for a manufactured home which is used for a temporary dependent care residence, or for a temporary emergency, construction or repair structure. To receive this exemption, the conditions for either a temporary dependent care residence or a temporary emergency, construction, or repair structure shall be met prior to any permits being issued.
- e. Manufactured homes shall be supported, properly tied down and underpinned as specified by the Uniform Standards Code for Manufactured Housing and Regulations (SC Code Ann. Section 40-29-10 et seq., at amended) and (23 SC Code Ann. Regs. 19-425 et seq.).

The manufactured home shall be completely underpinned at the time the last inspection is conducted and prior to the final power permit being issued. If this is not complete, the certificate of completion shall not be issued by the building and zoning department.

Manufactured homes shall be oriented on the site so that the front door faces the road from which the site has its access. This requirement shall apply to all lots located in manufactured home parks and subdivisions.

Exception to the above is:

- f. Manufactured homes placed in the floodplain shall meet the floodplain ordinance requirements.
- g. Properly constructed steps and landings with minimum dimensions of three (3) feet by three (3) feet of masonry or weather resistant material shall be installed at each entrance and exit (as per section 1012.1.6 or 1997 SBC). If a manufactured home is installed at a height that any portion of the land or deck is more than thirty (30) inches above finished grade, handrails and guardrails of weather resistant material must be provided with a minimum height of thirty-six (36) inches and no more than four (4) inches between pickets (as per 1997 SBC).
- h. Manufactured homes shall be connected to properly installed sewage disposal systems, potable water supply, approved electric service supply as per the most recent edition of SCDHEC regulations, Standard Plumbing Code, National Electric Code, etc. All utilities shall

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be either overhead or underground.

i. All existing manufactured homes, including those that do not meet the formal definition of such, shall meet the requirements specified by this section within 180 days of the effective date of this ordinance.

j. Manufactured homes shall not be used for storage space.

k. Manufactured homes built prior to June 15, 1976 shall not be disconnected from power and then reconnected. Therefore, such manufactured homes shall not be moved from one site in the county to another.

6. Modular units as special occupancies.

a. Modular units may be used for temporary offices provided the owner or lessee obtains a "temporary certificate of zoning compliance" and "certificate of occupancy" from the building and zoning department and is registered with the county. The placement and installation of modular homes for temporary use shall meet the requirements of such use as per the standard applicable codes or ordinances.

b. Provided the use or location does not violate provisions of this ordinance and the owner or lessee obtains a "certificate of occupancy" signed by the building and zoning department, a modular unit, intended and used as an office or other relevant approved use, may be used for said purposes and must be registered with Lancaster County and meet all applicable standard codes for use. Said use shall meet all applicable standard codes for occupancy.

c. A modular unit may be used as a classroom by a school or religious institution, provided it is registered with Lancaster County and meets all applicable requirements of the standard codes and ordinances of the county.

7. Moving permits required.

a. Moving permits shall be filed on forms provided by the building and zoning department. The moving permit shall be issued when all taxes due on the manufactured home have been paid. The permit shall be valid for 15 days with an extension approved by the building and zoning department for just cause; however, any such extension shall not exceed 15 days.

b. The manufactured home moving permit shall accompany the manufactured home while it is being moved. The permit shall be displayed on the rear of the manufactured home in a conspicuous place. It shall be the duty of the transporter that the requested moving permit is properly displayed and accompanies the manufactured home while in transport.

c. A manufactured home dealer or other agency repossessing a manufactured home under a security agreement, or upon receipt of a legal repossession document from the principal of the security agreement, may move a manufactured home from where it is located and relocate it to a secure location within Lancaster County until a moving permit can be obtained, not to exceed 15 days. Under no circumstances shall the manufactured home leave the boundaries of the county until all taxes and other county liens are satisfied and a moving permit is issued.

d. When a dealer moves a manufactured home for rental purposes.

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8. Permits not required.

- a. A manufactured home dealer brings a Class A or Class B manufactured home into Lancaster County for resale purposes. No Class C manufactured homes shall be allowed to be moved into and located in the county.
- b. A manufactured home dealer delivers a manufactured home that is sold from the sales lot.

(Ord. No. 323, 2-1-99; Ord. No. 362, 1-31-00; Ord. No. 412, 12-18-00; Ord. No. 561, 8-25-03; Ord. No. 1023, 4-12-10; Ord. No. 1035, 6-7-10)

Section 4.1.13 - Manufactured home parks.

(See Chapter 13 for development regulations.)

Section 4.1.14 - Manufactured home storage lots.

1. Such lots shall be screened from public view and from all adjoining lots by a Type 2 buffer yard. All plants shall be evergreens.
2. Manufactured homes built prior to June 15, 1976 shall not be allowed to be stored on any property within the county.

(Ord. No. 323, 2-1-99)

Section 4.1.15 - Manufactured home subdivisions.

Manufactured home subdivisions are allowed only in those districts where individual manufactured homes are allowed. Lots and yards within a manufactured home subdivision shall be developed to the standards of the zoning district in which it is located. All manufactured homes located in such developments shall also comply with all applicable conditions contained in section 13.13 of this ordinance.

(Ord. No. 323, 2-1-99)

Section 4.1.16 - Manufacturing/processing uses.

1. *Purpose.* The purpose of this section is to prevent land or buildings from being used or occupied in any manner so as to create any dangerous, injurious, noxious or otherwise objectionable or hazardous condition. Toward this end, the operational characteristics of all nonresidential uses shall be measured for conformance with the limitations of this section.

2. *Vibration.*

No vibration shall be produced which is transmitted through the ground and is discernable without the aid of instruments or at any point beyond the lot line; nor shall any vibration produced exceed the following particle velocity levels, measured with a vibration monitor in inches per second at the nearest:

Steady-State Vibration Limits

	Peak Particle Velocity
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	(Inches Per Second)	
	Daytime	Nighttime
Residential property line	0.03	0.01
Non-residential property line	0.06	0.06

Nighttime limits shall be considered to prevail from 7:00 p.m. to 7:00 a.m. local time.

3. *Reserved.*

4. *Noise.* All noise shall be muffled so as not to be objectionable due to intermittence, beat frequency or shrillness. In no event shall the sound pressure level of noise radiated continuously from a facility exceed at the lot line the value given in Tables I and II in any octave band or frequency. Sound pressure level shall be measured with a sound level meter and an octave band analyzer that conform to specifications published by the American Standards Association. Maximum permissible sound pressure levels at the lot line for noise radiated continuously from a facility between the hours of 7 p.m. and 7 a.m.

TABLE I. NIGHTTIME SCHEDULE

	Sound Pressure Levels (In Decibels)	
Frequency Band (In Cycles Per Second)	At Non-residential Lot Line	At Residential Lot Line
20—74	69	65
75—149	60	50
150—299	56	43
300—599	51	38
600—1,199	42	33
1,200—2,399	40	30
2,400—4,799	38	28
48,00—10,000	35	20

TABLE II. DAYTIME SCHEDULE

Maximum permissible sound pressure levels at the lot line for noise radiated from a facility between the hours of 7 a.m. and 7 p.m. shall not exceed the limits of the preceding table except at specified and corrected below:

Type of Operation in	Correction
Character of Noise	(In Decibel*)
Daytime operation only	plus 5
Noise source operates less than 20% of any one-hour period	plus 5
Noise source operates less than 5% of any one-hour period	plus 10

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Noise source operates less than 1% of any one-hour period	plus 15
Noise of impulsive character (hammering, etc.)	minus 5
Noise of periodic character	minus 5
*Apply to the preceding table one of these corrections only.	

Noise emanating from construction activities between 7 a.m. and 7 p.m. shall be exempt from these requirements.

5. *Air pollution.* The emission of visible smoke, dust, dirt, fly ash, particulate matter from any pipes, vents, or other openings, or from any other source into the air, shall comply with the regulations of the South Carolina Pollution Control Authority or any other appropriate state agency. Air pollution emanating from construction activities between 7 a.m. and 7 p.m. shall be exempt from these requirements.

6. *Reserved.*

7. *Reserved.*

8. *Toxic matter.* The measurement of toxic matter shall be at ground level or habitable elevation and shall be the average of any 24-hour sampling period. The release of any airborne toxic matter shall not exceed the quantities permitted by SC DHEC or any other appropriate agency. If a toxic substance is not contained in said listing, the applicant shall satisfy the planning commission that the proposed levels will be safe to the general population.

9. *Exterior illumination.* All operations, activities, and uses shall be conducted so as to comply with the performance standards governing exterior illumination prescribed below.

In general, the pattern of light pooling from each light source shall be carefully considered to avoid throwing light onto adjacent properties. Light sources visible in residential or medical areas shall comply with light intensities indicated in Column A below. Light sources visible in commercial or industrial areas shall comply with light intensities indicated in Column B below.

	Column A	Column B
Bare incandescent bulbs	15 watts	40 watts
Illuminated buildings	15 ft. candles	30 ft. candles
Backlighting or luminous back ground signs	150 ft. lamberts	250 ft. lamberts
Outdoor illuminated signs & poster panels	25 ft. candles	110 ft. candles
Any other un-shielded sources, intrinsic brightness	50 candela per sq. centimeter	50 candela per sq. centimeter

Illumination shall be measured from any point outside the property. Illumination levels shall be measured with a photoelectric photometer having a spectral response similar to that of the human eye,

following the standard spectral luminous efficiency curve adopted by the International Commission on Illumination.

(Ord. No. 1034, 6-7-10)

Section 4.1.17 - Mini-warehouses.

Due to the need to better integrate mini-warehouses into the fabric of the community, all such uses shall meet the following requirements:

1. Mini-warehousing sites shall be at least two acres but not more than ten acres in size.
2. Lot coverage of all structures shall be limited to 50 percent of the total area.
3. Vehicular ingress/egress shall be limited to one point for each side of property abutting on a street lot line.
4. No business activities conducted by tenants other than rental of storage units shall be permitted on the premises.
5. There shall be no outside storage of materials.
6. None of the side walls of the structure shall be over 12 feet in height.
7. All outdoor lighting shall be installed so as not to exceed ten (10) feet in height and shall not shine or reflect directly onto any surrounding properties.
8. A Type 3 buffer yard, as defined in Chapter 12, shall be installed along any street frontage and any property line which abuts a residential district. All plants used to meet the requirements of the Type 3 buffer yard shall be evergreens.
9. When abutting any nonresidential district, a minimum of a Type 1 buffer yard shall be installed.
10. Individual storage units may be used for the storage of goods which are associated with any office, retail, or other business use. However, no business shall be allowed to operate from an individual storage unit.
11. The storage of radioactive materials, explosives, flammable, or hazardous chemicals shall be prohibited.
12. No parking spaces or drive aisles are allowed in any required side or rear yard.
13. The minimum drive aisle width shall be 24 feet in width and the entrance shall be setback a minimum of 75 feet from the right-of-way or easement line of the street from which the site has access.
14. The entrance to the site shall have a gate. The gate shall be setback a minimum of 75 feet from the right-of-way or easement line of the adjacent street. This space is required to allow for one (1) tractor trailer and one (1) automobile to be stacked while waiting to open the front gate.
15. The storage of vehicles on a temporary basis is only allowed to the rear of all the buildings on site.

Section 4.1.18 - Private or commercial horse stables.

Due to environmental consequences of keeping horses in residential areas, and elsewhere in the community, horse stables, pens, and areas for keeping horses shall meet the following requirements:

1. The lot or parcel shall have a minimum width of 100 feet and contain a minimum of two acres if the horse is to be fed by the property owner or a minimum of three acres if the horse is to graze. If the horses are to be fed by the property owner, an additional minimum one-half acre (21,780 square feet) for each horse or horse stall located on the site is required. If the animals are to graze, the minimum additional area required per horse shall be to three acres (130,680 square feet).
2. The lot must be designed and maintained to drain so as to prevent ponding and propagation of insects.
3. The lot must be designed and maintained so as to prevent the pollution by drainage to adjacent streams and other water bodies.
4. The premises must be maintained in a sanitary condition through the proper use of lime and pesticides.
5. The premises must be maintained by keeping manure piles in covered containers at least 50 feet from any dwelling or any pool, patio or other residential structure on an adjoining lot and from any property line. This requirement shall apply to residential uses in the residential zoning areas only.
6. If the animals are in a contained area, all manure shall be removed at least twice daily from confined areas so as to prevent propagation of flies and creation of odors. Owners of horses in confined areas are encouraged to use a Rabon supplement as this will reduce the propagation of flies.
7. All grain on the lot must be stored in rodent-proof containers.
8. The exercise and training areas on the lot shall be dampened so as to prevent dust.

Section 4.1.19 - Recycling facilities, convenience centers, and resource recovery facilities.

Due to the need for convenient collection locations and the potential for conflict with existing development and environmental amenities, all such uses shall meet the following requirements:

1. *Reserved.*
2. Facilities shall be located a minimum of five hundred (500) feet away from any religious institution, school, historical place, public park, day care center, or existing residential use or district.
3. All buildings and structures involved in the operation of these facilities shall be a minimum of three hundred (300) feet (measured in a straight line) from the centerline of any public road. Such parcels shall have direct access to a collector or arterial street. Access roads/easements shall maintain a minimum travel surface of eighteen (18) feet and have a width of thirty (30) feet at the entrance intersection with a collector or arterial street, so as to accommodate truck traffic.

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4. Facilities shall be screened by a Type 4 buffer yard, as defined in Chapter 12. Where the required buffer yard is to be installed adjacent to a residential district or use, all plants used to meet this requirement shall be evergreens.
5. All exterior storage of material shall be in sturdy containers or enclosures which are secured and maintained in good condition, or shall be baled or palletized. Storage containers for flammable material shall be constructed of nonflammable material. Materials such as woodchips or other large bulky items shall be exempt from having to be placed in containers or enclosures.
6. Sites shall be maintained free of litter and all other undesirable materials, shall be cleaned of loose debris on a daily basis, and shall be secured from unauthorized entry and removal of materials when attendants are not present.
7. Space shall be provided on site for customers to circulate, park, and deposit recyclable materials and solid waste.
8. Donation areas shall be kept free of litter and any other undesirable material. The containers shall be clearly marked to identify the type of material that may be deposited. The facility shall display a notice stating that no material shall be left outside the recycling containers.
9. All applicable permits shall be obtained from the SCDHEC and any other permitting agency.

(Ord. No. 1073, § 2, 12-29-10)

Section 4.1.20 - Site built or modular single-family detached house located in the commercial, industrial or multiple-family districts.

In any area located from the parcels fronting on the southern right-of-way line of S.C. Highway 5 northward to the state line, eastward to the Union County (NC) line and westward to the York County line and which are zoned MF, B-1, B-2, B-3, B-4, I-1 and I-1 Light Industrial/Agricultural District, where both water and sewer is available and the parcel to be subdivided contains at least ten acres, subdivisions shall be allowed and shall comply with the requirements for single-family homes located in the R-15P, Moderate Density Residential/Agricultural/ Panhandle District.

In any other area of the county which is zoned MF, B-1, B-2, B-3, B-4, I-1 or I-2 Heavy Industrial District, where both water and sewer is available and the parcel to be subdivided contains at least ten acres, subdivisions shall be allowed and shall comply with the following requirements:

1. *Density:* The minimum lot shall be as outlined below. The maximum density is two and one-half (2.5) dwelling units per acre. The total number of dwelling units allowed on the site shall be based on the gross acreage of the site. For example, a one hundred-acre parcel of land shall be allowed to have two hundred fifty (250) dwelling units built on the site.
2. *Lot size:* The maximum lot size allowed in these areas shall be three-fourth ($\frac{3}{4}$) of an acre. Minimum standard lot size is ten thousand (10,000) square feet.
3. *Lot width and setback requirements:*

Lot width:	70 feet
Front	30 feet

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yard:	
Side yard:	10 feet

However, the side yard requirement may be reduced to zero (0) provided the following conditions are met:

- a. A windowless wall is placed on one side property line and the total side yard requirement is provided on the opposite side property line. For example, if a lot is sixty (60) feet in width, then a twelve-foot side yard would be required to be placed on the opposite property line from where the windowless wall is placed.
- b. The structure shall not encroach upon or be placed on the side yard property line adjacent to a street.
- c. Whenever a structure is located within four (4) feet of a side property line, a perpetual easement for wall and roof maintenance shall be provided on the adjacent lot. The minimum width of this maintenance access shall be four (4) feet. This easement shall be incorporated into each deed.
- d. Zero lot line development is only allowed in subdivisions where all of the lots shall use this technique.

Rear Yard, Principle Structure:	45 feet
Rear Yard Accessory Structure:	10 feet

e. *From external streets:* The minimum setback from external streets shall be same as is prescribed in the underlying zoning district.

f. *Between buildings:* The minimum distance between any two (2) buildings within this type of development shall be governed by the Standard Building Code. However, the director of emergency preparedness shall approve the fire protection measures for any development where the principal buildings are separated by less than twenty (20) feet.

5. Failure to achieve any of these provisions shall be sufficient reason for the planning commission to disapprove the subdivision request.

(Ord. No. 400, 4-8-02; Ord. No. 696, 10-3-05; Ord. No. 748, 5-1-06)

Section 4.1.21 - Reserved.

Editor's note— Former section 4.1.21 formerly contained regulations for solid waste storage and transfer facilities,

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waste tire treatment sites, and composting facilities which derived Ord. No. 309, adopted Sept. 28, 1998. Identical provisions were also included as § 4.2.8. As § 4.2.8 has been amended the editor has reserved former § 4.1.21 to avoid potential conflicts. Please see § 4.2.8 of this UDO.

Section 4.1.22 - Stockyards, slaughter houses, commercial poultry houses, commercial meat production centers and swine lots.

Such uses shall meet the following requirements:

1. All buildings and structures involved in the operation of the aforementioned uses, including, but not limited to, animal barns and decomposition facilities shall be sited a minimum of 500 feet (measured in a straight line) from the property line on which the production unit is located, and on a parcel of land of no less than 100 acres.
2. Signs advertising such use shall be subject to the same regulations as would apply under the Chapter 10, Signs if the property is commercially zoned, except that in no case shall more than one (1) freestanding sign be erected and that sign shall not exceed 32 square feet in sign surface area.
3. All buildings and structures involved in the operation of the aforementioned uses, including, but not limited to, animal barns and decomposition facilities shall be sited a minimum of 100 feet (measured in a straight line) from any water supply (public or private), stream, or watercourse.
4. All buildings and structures involved in the operation of the aforementioned uses, including, but not limited to, animal barns and decomposition facilities shall be sited a minimum of 500 feet (measured in a straight line) from the centerline of any public road. Parcels upon which the production unit is located shall have direct access via road frontage or indirect access via recorded easement to a major local street. Access roads/easements shall maintain a minimum travel surface of 18 feet and have a width of 30 feet at the entrance intersection with a major local street, so as to accommodate truck traffic.
5. The minimum separation requirement between this use and the following uses shall be as follows:

Neighboring Use Separation	
Requirement (Ft.)	
A residential use	1,320
A religious institution	2,640
Public or private schools and educational facilities	2,640
Public parks and recreational facilities	2,640
Commercial meat production center	2,640
Commercial and industrial uses	2,640
Incorporated municipal limits within Lancaster County	5,280

6. At a minimum, the applicant shall submit at the time an application is submitted the following documents for review:

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- a. Site inspection letter from SCDHEC stating that the site is suitable for the proposed operation;
- b. Aerial photographs showing the intended construction site(s) and manure spreading sites as well as notation of the type and size of the operation;
- c. Waste application contract form (SCDHEC Annex K) for all landowners consenting to have waste spread on their lands;
- d. A site specific waste application table from the Natural Resources Conservation Service stating that there are appropriate acres and crops to handle the expected quantity of waste.

7. Uses in this section shall obtain a zoning permit from the building and zoning department. As required in the Chapter 6, Permit Approval, of this ordinance, the applicant for a zoning permit for any use listed in this section which would produce any objectionable elements shall acknowledge in writing his understanding of the siting requirements of this ordinance and shall submit with the zoning permit application a compliance guarantee agreement to conform with such requirements at all times. Any violation of this compliance guarantee shall constitute a violation of this ordinance and shall be treated accordingly.

Section 4.1.23 - Temporary dependent care residences.

1. On any lot at least one and one-half acres (65,340 square feet) in size used for single-family residential purposes, the building and zoning official may issue a zoning permit to allow a manufactured home to be located on such a lot on a temporary basis under the following circumstances and conditions:

- a. The applicant for the permit presents a written certificate from a licensed physician stating that, because of poor health, there is a need for the direct custodial care between the occupant(s) of the principal residence on such a lot and the occupant(s) of the manufactured home;
- b. The occupants of the two (2) residences are related by blood or marriage or there is a legal guardianship relationship between them;
- c. The applicant submits a letter from the Lancaster County water and sewer district that demonstrates that separate water and sewer facilities for the manufactured home have been installed.

2. Permits for temporary dependent care residences authorized under this section shall be valid for a period of 12 months from the date of issuance, except the building and zoning official may renew such a permit in three (3) month increments if a written certificate from a licensed physician is obtained which states there is still a need for direct custodial care between the occupant(s) of the principal residence on such a lot and the occupants of the manufactured home.

3. Temporary residences authorized under this section shall not be subject to the density and dimensional regulations of this ordinance, but shall be subject to applicable setback requirements.

Section 4.1.24 - Temporary emergency, construction, or repair residences.

Permits for temporary residences to be occupied pending the construction, repair or renovation of the permanent residential building on a site shall expire within twelve (12) months after the date of issuance, except that the building and zoning official may renew such permits in three (3) month

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increments if he determines that such renewal is reasonably necessary to allow the proposed occupants of the permanent residential building to complete the construction, repair, renovation or restoration work necessary to make such building habitable. Temporary residences shall be removed within thirty (30) days of the completion of the project. The type of structures which shall be allowed as a temporary residence for purposes of meeting the requirements of this section shall only include manufactured homes, RV's, and travel trailers as long as the structure is set up to an approved septic system or to county water and sewer.

(Ord. No. 362, 1-31-00; Ord. No. 420, 2-5-01)

Section 4.1.25 - Temporary structures other than residences.

As indicated in the Table of Permissible Uses temporary structures used in connection with the construction of a permanent building or for some other non-recurring purpose are permissible with a zoning permit in all districts. However, all such uses shall meet the following requirements:

1. Permits for such uses shall expire automatically within the period established by the building and zoning official, and the expiration date shall be written on the face of the permit. In determining the initial period (which shall not exceed two years) the building and zoning official shall consider (among other relevant factors) the need for the temporary structure and the degree to which the temporary structure adversely affects adjoining or neighboring properties. Using similar criteria, the building and zoning official shall renew the permit for not more than two additional periods of not more than six months each.
2. Upon the expiration of a permit or when the original reason for the temporary structure no longer exists, whichever occurs first, the structure shall be removed within one week.

Section 4.1.26 - Wireless communications transmission facilities.

1. *Preamble.* The expansion of wireless communications technology has produced an increased need for antennae and the wireless communications transmission facilities to support them. The purposes of the Federal Telecommunications Act of 1996 are "To promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies."

The Lancaster County Council finds the rapid development of this technology is in the public interest. Therefore, the council desires to enact zoning regulations and other changes in public policy which will allow such services to be rendered in conformity with the Federal Telecommunications Act of 1996, to meet the goals of the county's comprehensive plan, which is entitled The New Millennium; A Comprehensive Plan for Lancaster County and Its Municipalities, and to serve and protect the public health, safety, convenience, order, appearance, prosperity, and general welfare pursuant to the South Carolina Code of Laws (1976) as amended. The County Council further finds the regulation of wireless communications transmission facilities will provide for the orderly protection and retention of limited public resources such as skylines and vistas.

2. *Definitions.*1.

- a. *Wireless communications transmission facilities.* Wireless communications transmission facilities, as used in this ordinance, shall mean a tower, pole, or similar structure more than 30 feet in height erected on the ground or on a building or other structure, used primarily for the support of one or more antenna(e) which are used as support for any personal wireless services as defined

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in the Federal Telecommunications Act of 1996 including cellular, personal communications services (PCS), paging equipment and similar services that currently exist or may in the future be developed. This term shall not include radio and television stations' antenna(e), residential television antenna, any antenna(e) which is part of a communication system used by a business to communicate with their employees or satellite dishes, etc.

b. *Concealed or camouflaged wireless communications transmission facilities.* Wireless communications transmission facilities and associated equipment which are totally concealed within an architectural feature of a building, within a structure or camouflaged so it is architecturally indiscernible or located on a water tower or electrical high tension tower, etc.

c. *Fall zone.* The area on the ground within a prescribed radius from the base of a wireless communications transmission facility within which there is a potential hazard from falling debris or collapsing material.

d. *Height.* Height of a wireless communications transmission facility is the distance from the base of the wireless communications transmission facility to the top of the wireless communications transmission facility which shall include any antenna(e) that extends above the top of the wireless communications transmission facility.

e. *Personnel communications service.* This technology is similar to traditional cellular technology. However, it operates over a network of smaller coverage cells, requires more facilities to cover an area, and uses lower radio frequencies to transmit data.

3. *General provisions.* The provisions contained within this section are intended to achieve a reasonable balance between public safety, health, convenience, appearance considerations, and the need to encourage flexible and efficient delivery of communications services. All applicable health, nuisance, noise, fire, building, and safety code requirements shall apply in addition to the provisions of this section. All zoning code provisions except those specifically superseded by this section shall also apply.

4. *Concealed or camouflaged wireless communications transmission facilities.* A concealed wireless communications transmission facility which is located within a structure such as a church steeple, or bell tower, or is attached to a bell tower, a water tank, an electrical high tension tower, etc. shall be exempt from these regulations except from those contained in this subsection. In addition, such wireless communications transmission facilities shall be a permitted use in all zoning districts, including residential.

If meeting the definition of a concealed or camouflaged wireless communications transmission facility requires any addition to an existing structure, any modification to any architectural feature of a structure or the construction of a structure to conceal or help camouflage a wireless communications transmission facility, the planning staff shall review the plans for such changes or new construction prior to any permit being issued. In reviewing such plans, staff shall at least consider whether the addition, feature or new construction is architecturally harmonious in such aspects as material, height, proportion, bulk, scale and design with the building or complex of which it is a part. If it is a stand-alone structure, it shall be reviewed as to whether the structure is harmonious with the surrounding area. In reviewing such a request, should the planning staff not consider the addition, modification or new construction to be a concealed or camouflaged wireless communications transmission facility, the applicant shall have the right to appeal this decision to the board of zoning appeals.

In any zoning district, communication antennae are a permitted use when attached to electrical high

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tension towers or water tanks, etc. as long as:

- a. The increase in height to the structure shall not exceed 30 feet; and
- b. The applicant provides a satisfactory structural analysis of the electrical high tension tower or water tank, etc. prior to the issuance of any permit. Such an analysis shall be conducted by a structural engineer.

5. *Wireless communications transmission facilities.* The following requirements shall apply to all wireless communications transmission facilities except those listed in subsection 4.

a. Applicant shall demonstrate that the proposed tower is necessary. A proposed wireless communications transmission facility shall not be approved if an existing wireless communications transmission facility can be reasonably modified to meet the applicant's technical design requirements and will function as required by applicable regulations. If this cannot be accomplished, then prior to consideration of a permit for location on private property which must be acquired, the applicant must demonstrate that available alternative sites, whether publicly or privately owned and which are occupied by a compatible use, are unsuitable for the operation of the facility under applicable communications regulations, cannot meet the applicant's technical design requirements or are otherwise not reasonably available. Only after all preceding options are exhausted, shall the county consider an application for a new wireless communications transmission facility.

b. Setbacks: Wireless communications transmission facilities shall be allowed in all zoning districts, except a planned development district (PDD), based on the requirements of this section. The placement of a wireless communications transmission facility in a PDD shall be governed by the regulations establishing the PDD. Along all property lines, which are adjacent to residentially zoned property or property which is used for residential purposes, the setback requirements shall be equal to the height of the tower. This setback requirement shall also apply along any road rights-of-way/easements regardless of how the adjacent property is zoned or used. Residential districts shall include all "R" districts and the MF, Multiple-family, and MHP, Manufactured Home Park Districts. Where the adjacent property is zoned either commercially or industrially, the setback shall be equal to the fall zone for the tower or 60 percent of the height of the tower, (whichever would establish the greater setback requirement). The fall zone of the tower shall be determined by the applicant based on documentation from a structural engineer or the product representative. Subsequent to the establishment of a wireless communications transmission facility, no rezoning of an external lot shall increase the setback requirements of the existing facility. An adjacent property owner can waive this setback requirement but shall not be able to waive the setback requirement along a road right-of-way or easement if the property owner provides the building and zoning department with the following statement which has been signed and notarized:

"I understand that by signing this statement I am authorizing a wireless communications transmission facility, a cellular tower, to be built closer to my property line than is recommended by the county. Additionally, I understand there is a possibility that if the subject wireless communications transmission facility was to collapse, which is a rare occurrence, that a portion or all of the structure could fall on my property. Therefore, I relieve the county of any legal responsibility for any injury which may occur to an individual on my property or for any damage which may occur to any structure, vehicle, etc. which maybe located on my property and accept all responsibility for any damages

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which may occur from allowing this structure to be built closer to my property line than is recommended by the county."

- c. The only structures which will be allowed to be constructed within the setback requirements of a tower will be those structures which are considered to be accessory to the tower. Such structures would include, but not be limited to, storage, maintenance and equipment buildings.
- d. Buffering requirements:
 - (1) Existing mature trees and natural land forms on the site shall be preserved to the extent feasible. However, vegetation that causes interference with the transmission of an antenna or, if the vegetation inhibits access to any accessory structure on the site, it shall be allowed to be cut.
 - (2) An eight-foot tall fence shall be installed around the outer perimeter of the base of the wireless communications transmission facility and any associated building(s). The fence shall enclose all structures comprising the facility into one defined area. A wall of any building which is used as part of the operation of a wireless communications transmission facility on the site may be used in combination with a fence to form this enclosure.
- e. Any tower up to 180 feet in height shall be designed and equipped with the technological and structural capability to accommodate at least two (2) wireless communications carriers. Any tower over 180 feet in height shall be designed and equipped with the technological and structural capability to accommodate at least three (3) wireless communications carriers. The applicant shall provide documentation from a structural engineer or the product representative showing the wireless communications transmission facility antenna capacity by type and number, and a certification that the wireless communications transmission facility is designed to withstand winds in accordance with ANSI/TIA 222 (latest revision) standards.
- f. Wireless community transmission facilities located near airports: If a structure is located in an area which could interfere with established flight patterns surrounding an airport, the height of the structure shall be reviewed by both the Federal Aviation Administration (FAA) and the Lancaster County Airport Commission. The airport commission will make its recommendation no more than 30 days after submittal. In determining if the proposed location of a wireless communications transmission facility could interfere with established flight patterns, the applicant shall contact both the FAA and the Lancaster County Airport Commission. A copy of the agencies' findings shall be provided to the Lancaster County Planning Department and the building and zoning department prior to any building permits being issued. The review shall be completed by the chairman of the commission.
- g. No wireless communications transmission facility subject to these provisions shall be erected having a separation of less than ½ mile (2640 feet as measured in a straight line) from an existing wireless communications transmission facility subject to these provisions. This provision may be waived upon certification by the applicant that technical reasons require a closer placement and staff agrees with their information.
- h. The owner of the tower shall make excess capacity not reserved for its own use available at fair market value to other providers and shall submit a notarized statement indicating their willingness to adhere to this condition.
- i. No permit application shall be considered for the location of a wireless communications

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transmission facility on property not either leased or owned by the applicant or for which a contingent lease or purchase contract is in place. The amount of land either purchased or leased shall be equal to the amount of land necessary to meet the requirements of subsection 5.b. To show this requirement has been met, the applicant shall provide the county with a survey of the land and a copy of the lease or contract of sale or deed.

j. On sites where there is an existing building, a wireless communications transmission facility shall not be located between the structure and any road right-of-way or easement for a road.

k. Wireless communications transmission facilities shall not be lighted unless required by FAA regulations. When required, lighting shall conform with the minimum applicable FAA regulations.

l. Wireless communications transmission facilities shall contain only equipment meeting applicable FCC regulations.

m. Wireless communications transmission facilities shall be a blending color such as light gray, unless otherwise prescribed by FAA regulations. A properly maintained and unpainted galvanized steel surface shall meet this requirement.

n. A single sign, not exceeding two square feet in area, shall be placed in a visible location on the wireless communications transmission facility identifying the owner, date of construction, and a 24-hour emergency telephone number.

o. Prior to issuing a permit, county officials may make use of technical services of any competent source of such services, to determine that all required standards are met.

p. To assure the removal of a wireless communications transmission facility which ceases to be used for any telecommunications purpose, the wireless communications transmission facility owner shall submit to the county planning department a performance bond for each wireless communications transmission facility erected after the effective date of this section and a notarized statement stating the owner shall be responsible for the removal of such wireless communications transmission facility within 90 days of the owner providing staff notice that the wireless communications transmission facility is considered to be no longer in use. The performance bond shall be for an amount which is equal to 125 percent of the estimated cost of having the structure removed. The estimated cost shall be based upon written certification from the owner's engineer that the estimated amount is adequate to cover the cost of removal. A wireless communications transmission facility is considered to be no longer in use if it is not used for any telecommunications purpose for more than 120 days. The board of zoning appeals may grant additional time to the wireless communications transmission facility owner.

6. *Appeals and variances.* If the building and zoning official has denied an application or failed to act thereon within 60 days, unless extended by mutual agreement, the applicant may appeal to the board of zoning appeals. Such appeals, other appeals concerning interpretation or administration of this section, and appeals for a variance from the provisions of this section shall be made pursuant to the provisions of Chapter 8 of the Lancaster County Unified Development Ordinance. In addition to the authority and obligations conferred by the aforementioned chapter, the board of zoning appeals in considering a variance shall conform to the provisions of Section 4 of the Federal Telecommunications Act of 1996 requiring "substantial evidence contained in a written record" be provided prior to the denial of any variance requested, shall require that an applicant satisfy all provisions of this section except requirements for which a variance is approved and may impose additional conditions deemed necessary for the public health and safety and protection of adjacent property.

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7. *Application requirements.* An application to the board of zoning appeals shall be completed and the applicable application fee paid. The fee for this application shall be the same fee charged for a standard variance application. This fee shall be in addition to any other building or permit fees. The planning director may waive portions of these application requirements which are found not to be applicable to a particular tower/antenna installation.

The application shall include the following elements:

- a. A site plan showing property boundaries, all zoning district boundaries in the area, required setbacks, existing structures, use of adjacent properties, the proposed tower location, site elevation, tower height, guy anchors, driveway(s), parking area(s), fencing and landscaping.
- b. Plans and specifications for the proposed wireless communications transmission facility including foundation, wind and ice loading, antennae and accessories, and any accessory structure(s).
- c. A current map or update for an existing map on file, showing the locations of all of the applicant's existing and proposed wireless communications transmission facilities within the county which are reflected in public records and serving any property within the county.
- d. Identification of the owners of all antennae and related equipment to be located on the site; written authorization from the site owner for the application; evidence that a valid FCC license for the proposed activity, if applicable, has been applied for; and a copy of FCC form 854 (Application for antenna structure registration), if applicable.
- e. Any additional information as may be required by the planning director or building official to determine that all applicable regulations shall be met, including certifications by the applicant or other documentation evidencing compliance with the provisions of this section.

(Ord. No. 413, 12-18-00; Ord. No. 602, 4-5-04; Ord. No. 748, 5-1-06)

Section 4.1.27 - Motor vehicle dealer (used).

Motor vehicle dealer (used) shall be sited to meet the following requirements:

1. Such use shall be located in the B-2 Community Business District.
2. The lot shall not contain more than twenty-five (25) vehicles for sale or lease at any one time.
3. No stringed pennants or streamers, typically associated with automobile dealerships, shall be permitted.
4. Signage shall be in compliance with the B-2 zoning specifications.
5. Parking shall be provided which is in compliance with the standards contained in chapter 11 for car sales or rental.
6. Proof shall be required that required licenses, fees, etc. have been obtained and paid.
7. A street yard shall be planted on the site in accordance with the requirements of Chapter 12, Landscaping Requirements.
8. Around the foundation of any building, shrubs shall be planted in an area which is a minimum

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of fifteen (15) feet in width. The shrubs shall be appropriately spaced based on the width of the shrub at maturity. These shrubs shall be evergreens and shall meet the minimum requirements contained in Chapter 12, Landscaping Requirements, for the installation of shrubs.

9. A Type 3 buffer yard shall be installed along that portion of any property line which adjoins a residentially zoned or residentially used parcel of land.

(Ord. No. 539, 4-29-03)

Editor's note— Ord. No. 539, adopted April 29, 2003, amended the unified land development regulations by adding provisions designated as section 4.1.13. In order to avoid conflicts in section numbering the editor has redesignated the provisions of Ord. No. 539 as section 4.1.27

Section 4.1.28 - Body piercing establishment, body branding establishment, or tattoo parlors.

This use shall meet the following requirements:

1. The use shall be located no closer than 500 feet from the following uses:
 - a. Adult day care;
 - b. Child day care;
 - c. Educational institution (public or private);
 - d. Public facility (library, park, playground, recreational facility, etc.);
 - e. Religious institution;
 - f. Residential zoning district; and
 - g. Another body piercing establishment, body branding establishment or tattoo parlor.
2. Any permits required by SC DHEC, LLC and any other federal, state or local governmental department or agency which has rules and regulations governing these types of uses.

(Ord. No. 509, 8-16-02; Ord. No. 615, 8-2-04)

Section 4.1.29 - Mining and extraction operations.

Such uses shall meet the following requirements:

1. A mining permit shall be obtained from the South Carolina Department of Health and Environmental Control (DHEC) or any successor agency with authority to regulate mining prior to securing a zoning permit. The mining permit shall have been issued within six months of the date prior to the request for the zoning permit.
2. A copy of the reclamation plan as required by DHEC shall accompany the application.
3. The applicant shall provide the Lancaster County Building & Zoning Department with a copy of the approved application regarding mining/blasting activities and shall comply with all applicable requirements of S.C. Code Ann. Regs. 71-8302 et.seq. as they may be amended from time to time.

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4. To protect against damage to structures from vibration, in all blasting operations the maximum peak particle velocity measured in any three mutually perpendicular directions shall not exceed one inch per second at the immediate location of any dwelling, public building, school, church, or commercial or institutional building. The minimum distance shall be determined by the current weight distance formula adopted under S.C. Code Ann. Regs. 89-150 F-G as they may be amended from time to time or any DHEC approved alternative methods of determining compliance such as seismographic monitoring.
5. Blasting operations shall be conducted in compliance with the contiguous property setback requirements of S.C. Code Ann. Regs. 89-150 H as it may be amended from time to time, or in compliance with any variance or other approval issued by DHEC. For the purposes of this subsection, a contiguous property shall not include parcels under the ownerships, lease, or control of the applicant, or where the property owner has signed a written waiver of this setback requirement.
6. In accordance with the requirements of R. 89-150 I as it may be amended from time to time, the DHEC mining permit shall specify a minimum blasting separation distance between the nearest point of blasting and any offsite structures in existence as of the date of the completed DHEC mine permit application.
7. Neither the maximum peak particle velocity requirement nor the minimum separation distance requirement apply to structures within the permitted area, within any area that is owned, leased, or controlled by the operator; or to any structure for which the owner has executed a waiver of damage claim.
8. A type 4 bufferyard shall be required along the margins of the property boundary. In the required bufferyard, existing trees and vegetation can remain in a natural state provided the property width of the type 4 bufferyard is maintained. Existing vegetation shall count toward the proposed buffer. Evergreen plants shall be used to meet this requirement.
9. The site shall have direct access to either a collector or arterial street.
10. Access roads/easements shall maintain a minimum travel surface of 18 feet and have a width of 30 feet at the entrance intersection with a collector or arterial street. An area on the site shall be provided to accommodate vehicles entering the site so that no traffic waiting to enter the site will be backed up onto any public or private right-of-way or easement. This area shall be designated to handle the anticipated traffic.
11. The requirements of Chapter 4, Section 4.1.19, Manufacturing/processing uses, shall be applicable to any ore processing facility associated with mining operations.

(Ord. No. 979, 4-27-09)

Sec. 4.1.30 - Golf courses.

Due to the potential hazard of collisions between aircraft and birds, golf courses shall meet the following requirements

1. No portion of a golf course shall be located within five thousand (5,000) feet of the outermost boundaries of a parcel whereupon is situated a primary surface to which an instance of an Aviation Corridor Overlay is oriented, and which serves only propeller-driven aircraft not exceeding

twelve thousand five hundred ((12,500) pounds gross weight.

2. No portion of a golf course shall be located within ten thousand (10,000) feet of the outermost boundaries of a parcel whereupon is situated a primary surface to which an instance of an Aviation Corridor Overlay is oriented, and which serves propeller-driven aircraft exceeding twelve thousand five hundred (12,500) pounds gross weight and/or jet aircraft.

(Ord. No. 1018, 2-22-10)

Sec. 4.1.31 - Livestock production.

Due to the potential hazard of collisions between aircraft and birds, livestock production facilities shall meet the following requirements:

1. No portion of a livestock production facility shall be located within five thousand (5,000) feet of the outermost boundaries of a parcel whereupon is situated a primary surface to which an instance of an Aviation Corridor Overlay is oriented, and which serves only propeller-driven aircraft not exceeding twelve thousand five hundred (12,500) pounds gross weight.
2. No portion of a livestock production facility shall be located within ten thousand (10,000) feet of the outermost boundaries of a parcel whereupon is situated a primary surface to which an instance of an Aviation Corridor Overlay is oriented, and which serves propeller-driven aircraft exceeding twelve thousand five hundred (12,500) pounds gross weight and/or jet aircraft.

(Ord. No. 1018, 2-22-10)

Sec. 4.1.32. - Wastewater treatment facilities.

Due to the potential hazard of collisions between aircraft and birds, waste treatment facilities shall meet the following requirements:

1. No portion of a wastewater treatment facility shall be located within five thousand (5,000) feet of the outermost boundaries of a parcel whereupon is situated a primary surface to which an instance of an Aviation Corridor Overlay is oriented, and which serves only propeller-driven aircraft not exceeding twelve thousand five hundred (12,500) pounds gross weight.
2. No portion of a wastewater treatment facility shall be located within ten thousand (10,000) feet of the outermost boundaries of a parcel whereupon is situated a primary surface to which an instance of an Aviation Corridor Overlay is oriented, and which serves propeller-driven aircraft exceeding twelve thousand five hundred (12,500) pounds gross weight and/or jet aircraft.

(Ord. No. 1018, 2-22-10)

Section 4.2 - Purpose for special exceptions.

Due to the nature and potential impact of uses listed in this section, the board of zoning appeals shall call for and conduct a public hearing on any application to establish such a use in the county, having given at least 15 days notice of time and place of the hearing in a newspaper of general circulation in Lancaster County. Variances from these minimum requirements should not be approved unless the applicant can demonstrate a hardship would occur if the ordinance is applied to the site as written.

Section 4.2.1 - Automotive wrecking, and/or junk, and/or salvage yards.

Due to the environmental consequences and potential negative impact, unregulated open storage of junk or salvage material shall be restricted to junk and salvage yards, as defined by this ordinance, and shall meet the following requirements:

1. Such uses shall be located no closer than 2,640 feet to any residential zoning district, religious institution, school, historical place, public park, or day care center, or 1,320 feet to an existing residential use not in a residential zoning district (a residential structure on the site is exempt from this requirement).
2. No material which is discarded and incapable of being reused in some form shall be placed in open storage.
3. No material shall be placed in open storage in such a manner that it is capable of being transferred out by wind, water, or other causes.
4. All paper, rags, cloth and other fibers, and activities involving the same other than loading and unloading shall be within fully enclosed buildings.
5. All materials and activities not within fully enclosed buildings shall be screened with an opaque vegetative buffer yard equal to a Type 4 Buffer yard as defined in Chapter 12. The buffer yard shall contain plants which, when mature, shall buffer all parts of the site from public view. All plants used for the buffer yard shall be evergreens.
6. This use shall comply with the regulations of section 4.1.11 of this ordinance.

Section 4.2.2 - Adult uses.

It is the purpose of this section to regulate adult entertainment establishments to promote the health, safety, and general welfare of the citizens of the county. It is also the purpose of this ordinance to establish reasonable and uniform regulations to prevent the future incompatible location and concentration of adult establishments within the county. The provisions of this section have neither the purpose nor effect of imposing any limitations or restrictions on the content of any communicative materials, including sexually oriented materials. Similarly, it is not the intent or effect of this section to restrict access by adults to sexually oriented entertainment or materials protected by the First Amendment, or to deny the distributors and exhibitors of sexually oriented entertainment access to their intended market. Neither is it the intent or effect of this section to condone or legitimize the observance of adult entertainment or the distribution of sexually oriented material.

Section 4.2.2.1 - Classifications.

Adult entertainment uses and establishments include, but are not limited to, adult arcades, adult bookstores, adult cabarets, adult motels, adult motion picture theaters, adult theaters, adult video stores, escort motels, escort services, and sexual encounter centers, as defined in Chapter 19, Definitions, of this ordinance, and any other establishment which contains activities characterized by the performance, depiction, or description of specific anatomical areas or specific sexual activities.

Section 4.2.2.2 - Location.

Measurements of distance separation shall be as described in section 4.1.1 with no consideration given to intervening structures, roads, or land forms.

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1. Adult establishments shall not be located closer than 2,640 feet from any:
 - a. Residential zoning district or structure used as a residence at time of the application for a special exception permit;
 - b. Religious institution;
 - c. Day care center;
 - d. Public or private educational facility;
 - e. Public library, playground, park, recreation facility, or other public facility;
 - f. Other adult establishment that provides adult entertainment or engages in the sale or rental of adult material as one of their principal business purposes;
 - g. Designated commercial, office, or industrial park.
2. No more than one (1) adult establishment shall be located on a parcel or in the same building, structure or portion thereof.
3. No other principal or accessory use shall occupy the same parcel, building, structure, or portion thereof with any adult establishment.

Section 4.2.3 - Construction, demolition, and land clearing debris landfills.

Use as a class two Landfill shall be permitted to operate in the county by both the county board of zoning appeals and SCDHEC and shall meet the following requirements:

1. *Reserved.*
2. Unless otherwise approved by the county, the site for a new class two landfill or expansion of an existing class two landfill shall meet the following standards:
 - a. The boundary of the fill area shall not be located within one thousand (1,000) feet of any residence, school, daycare center, church, hospital, or publicly owned recreational park area unless such features are included in the site design for a planned end use or otherwise approved by the county. The determination whether the new class two landfill or expansion of an existing class two landfill meets this requirement shall be made as of the date the use permit is requested.
 - b. The boundary of the fill area shall not be located within one hundred (100) feet of any property line. An exemption may be issued by the county upon receipt of written approval from adjacent property owners.
 - c. The boundary of the fill area shall not be located within two hundred (200) feet of any surface water that holds visible water for greater than six (6) consecutive months, excluding drainage ditches, sedimentation ponds and other operational features on the site.
 - d. Waste material shall not be placed on or within any property rights-of-way or within fifty (50) feet of underground or above ground utility equipment or structures, such as water lines, sewer lines, storm drains, telephone lines, electric lines, and natural gas lines, without the written approval of the impacted utility.

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3. Use as a class two landfill shall be located on a parcel containing a minimum of one hundred (150) fifty acres.
4. No material shall be placed in open storage or areas in such a manner that it is capable of being transferred out by wind, water, or other causes.
5. All materials and activities shall be screened in such fashion as to substantially minimize visual contact between adjacent uses and to create a strong impression of spatial separation through the use of a Type 4 Buffer yard.
6. The site shall be restored and revegetated on completion of use as a landfill.
7. The parcel shall have direct access via road frontage to a collector street. Access road/easements shall maintain a minimum travel surface of eighteen (18) feet and have a width of thirty (30) feet at the entrance intersection with a collector street, so as to accommodate truck traffic.
8. Reserved.

(Ord. No. 1073, § 3, 12-29-10)

Section 4.2.4 - Reserved.

Editor's note— Ord. No. 979, adopted April 27, 2009, repealed former section 4.2.4 in its entirety which pertained to mining and extraction operations and derived from Ord. No. 309, adopted Sept. 28, 1998.

Section 4.2.5 - Motorized race and testing tracks.

Motorized race and testing tracks are declared by this ordinance to be incompatible with residential development. Additionally, such uses have the potential of negatively impacting many nonresidential uses. As a result, all such uses shall meet the following requirements:

1. No such use shall be located within one (1) mile of any residential use.
2. A Type 4 buffer yard shall be provided along all property lines which are adjacent to the racing/testing track and/or parking areas.
3. The site shall have direct access to either a collector or arterial street.

Section 4.2.6 - Pistol, rifle or skeet range.

All such uses shall meet the following requirements:

1. No such use shall be located within one (1) mile from any residential use, church, school or day care facility.
2. The use shall be oriented away from inhabited areas.
3. The site upon which the use is proposed shall be suitable in size and topography to insure the safety of area residents.
4. The range shall have a natural earth embankment a minimum of 10 feet in height placed behind all targets within the shooting range.

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5. The hours of operation shall be as follows:

Monday through Saturday: 9:00 a.m. until sunset.

Sunday 1:30 p.m. until 6:00 p.m. or as stated on a request for a special event as outlined below.

Up to two times per calendar year, such businesses may be permitted to operate prior to 1:30 p.m. on Sundays for special events (i.e. state tournament). If such a business wants to hold a special event which would require the business to open before 1:30 p.m. on Sundays, the owner shall submit a written request to the planning director. This request shall include the name of the business, the business address, name of owner, what would be opening and closing time, and the date of the event. Additionally, the owner shall submit a list of all adjacent property owners so each can be sent a notice of which Sunday the business will open during hours other than between 1:30 p.m. and 6:00 p.m. Accompanying this list shall be an addressed, stamped envelope for each person on the list of adjacent property owners. Such businesses shall only be permitted to hold two special events per calendar year which require them to operate prior to 1:30 p.m. on Sunday.

The hours of operation listed in this subsection are the maximum hours such an operation shall be allowed to operate. During the special exception process, if the board of zoning appeals determines the surrounding conditions warrant more restrictive hours of operation, the board shall have the right to set such hours of operation.

(Ord. No. 323, 2-1-99; Ord. No. 470, 11-26-01)

Section 4.2.7 - Sanitary landfills.

Due to consideration for the public health and safety and potential pollution to the environment resulting from class three landfills, any such use shall meet the following requirements:

1. *Reserved.*
2. *Reserved.*
3. New class three landfills and class three landfill expansions shall meet the following buffer zone requirements:
 - a. The boundary of the fill area shall not be located within five thousand two hundred eighty (5,280) feet of any residence, day-care center, church, school, hospital or publicly owned recreational park area unless such features are included in the site design for a planned end use or otherwise approved by the county. The determination whether the new class three landfill or expansion of an existing class three landfill meets this requirement shall be made as of the date the use permit is requested.
 - b. The boundary of the fill area shall not be located within two (200) hundred feet of any property line not under control of the owner or operator.
 - c. The boundary of the fill area shall not be located within two hundred (200) feet of any surface water that holds visible water for greater than six (6) consecutive months, excluding ditches, sediment ponds, and other operational features on the site.

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- d. Waste material shall not be placed on or within any property rights-of-way or within fifty (50) feet of underground or above ground utility equipment or structures, such as water lines, sewer lines, storm drains, telephone lines, electric lines, and natural gas lines, without the written approval of the impacted utility.
4. The new class three landfill or class three landfill expansion shall be located on a parcel containing a minimum of two hundred fifty (250) acres.
5. *Reserved.*
6. A drainage and sedimentation plan showing all off-site runoff shall accompany the request.
7. The site shall have direct access to either a collector or arterial street. Access roads/easements shall maintain a minimum travel surface of eighteen (18) feet and have a width of thirty (30) feet at the entrance intersection with a collector or arterial street, so as to accommodate truck traffic.
8. The facility shall be screened in such a fashion as not to be visible from off-site. A Type 4 Buffer yard, as defined in Chapter 12, shall be installed to meet this requirement. All plants used to meet this requirement shall be evergreens of sufficient size to accomplish buffering and screening at the time of installation.
9. No waste materials capable of being blown from the site shall remain uncovered or unsecured at the end of a work day.
10. The site shall be restored and revegetated on completion of use as a class three landfill.
11. All applicable permits shall be obtained from SCDHEC and any other permitting agency and all the agency regulations shall be followed.
12. *Reserved.*
13. Owners or operators of new class three landfills, existing class three landfills and expansions of existing class three landfills must meet the following airport safety requirements:
- a. For landfills that are located within ten thousand (10,000) feet (3,048 meters) of the end of any airport runway used by turbojet aircraft or within five thousand (5,000) feet (1,524 meters) of the end of any airport runway used only by piston-type aircraft, the owner or operator of the landfill must demonstrate the landfill is designed and operated so that the landfill does not pose a bird threat to aircraft.
- b. If the new class three landfill or the expansion of an existing class three landfill is proposed to be sited within a six (6) miles radius of the end of any airport runway used by turbojet or piston-type aircraft, the owner or operator must notify the affected airport and the Federal Aviation Administration.
- c. The owner or operator must place the demonstration required by subsection 13.a. above in the operating record and notify the SCDHEC that it has been placed in the operating record.
- d. As used in this section:

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- (1) *Airport* means a public use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities; and
- (2) *Bird hazard* means an increase in the likelihood of bird and aircraft collisions that may cause damage to the aircraft or injury to its occupants.

(Ord. No. 1001, § 2, 11-2-09; Ord. No. 1073, § 4, 12-29-10; Ord. No. 1086, § 1, 5-23-11)

Section 4.2.8 - Solid waste storage and transfer facilities, waste tire treatment sites, and composting facilities.

All solid waste transfer facilities must meet the following requirements unless otherwise approved by the county:

1. *Reserved.*
2. *Reserved.*
3. The active waste handling area of a transfer facility shall not be located within one hundred (100) feet of any property line. The active waste handling area of a transfer facility shall not be located within two hundred (200) feet of any residence, school, hospital or recreational park area.
4. The solid waste transfer facility shall be located on a parcel containing a minimum of five (5) acres.
5. A Type 4 Buffer yard shall be installed along all property boundaries. All plants used to meet this requirement shall be evergreens.
6. All exterior storage of material shall be in sturdy containers or enclosures which are covered, secured, and maintained in good condition, or shall be baled or palletized. Storage containers for flammable material shall be constructed of nonflammable material.
7. The site shall be maintained free of litter and all other undesirable materials, and shall be cleaned of loose debris on a daily basis and shall be secured from unauthorized entry and removal of materials when attendants are not present.
8. Space shall be provided on site for vehicles to circulate, park, and deposit materials and solid waste.
9. All applicable permits shall be obtained from the SCDHEC and any other permitting agency and all the agency regulations shall be followed.
10. The solid waste transfer facility shall have direct access to either a collector or arterial street. Access roads/easements shall maintain a minimum travel surface of 18 feet and have a width of 30 feet at the entrance intersection with a collector or arterial street, so as to accommodate truck traffic.
11. *Reserved.*
12. *Reserved.*
13. *Reserved.*

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(Ord. No. 1018, 2-22-10; Ord. No. 1073, § 5, 12-29-10)

Section 4.2.9 - Special events.

1. In deciding whether a permit for a special event should be denied for any reason specified in Chapter 6, Permit Approval, of this ordinance, or in deciding what additional conditions to impose, the board of zoning appeals shall ensure that the special event meets the following requirements:
 - a. The hours of operation allowed shall be compatible with the uses adjacent to the activity;
 - b. The amount of noise generated shall not disrupt the activities of adjacent land uses;
 - c. The applicants shall guarantee that all litter generated by the special event be removed at no expense to the county;
 - d. The parking generated by the event can be accommodated without undue disruption to or interference with the normal flow of traffic or with the right of adjacent and surrounding property owners to the beneficial use and enjoyment of their property.
2. In cases where it is deemed necessary, the building and zoning department shall require the applicant to post a bond to ensure compliance with the conditions of the special exception permit.
3. If the applicant requests the county to provide extraordinary services or equipment, or if the county otherwise determines that extraordinary services or equipment should be provided to protect the public health or safety, the applicant shall be required to pay to the county a fee sufficient to reimburse the county for the costs of these services. This requirement shall not apply if the event has been anticipated in the budget process and sufficient funds have been included in the budget to cover the costs incurred.

Section 4.2.10 - Video game machine establishments.

The placement or location of a video game machine establishment shall meet the following criteria:

1. No such establishment shall be located within 300 feet of another video game machine establishment.
2. No such video game machine establishment shall be permitted within 1,320 feet of any religious institution, residential zoning district, day care center, public or private educational facility, public library, playground, park recreational facility or other public facility.
3. No other principal or accessory use shall occupy the same parcel, building, structure, or portion thereof with any such establishment.
4. No more than one (1) such establishment shall be located on a parcel or in the same building, structure or portion thereof.

(Ord. No. 453, 10-1-01)

Section 4.2.11. - Turkey shoots.

1. No firing point may be located less than 200 feet in any direction from any property line.

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2. The minimum distance from any firing point, measured in the direction of fire to the nearest property line, may not be less than 300 feet or 300 yards from a dwelling, school, church, or other occupied building, park or recreation area or any other type of public gathering place, whichever is greater. A turkey shoot, operated by a recognized gun club, meeting the standards as recommended by the National Rifle Association or an equally recognized firearms safety authority for the type of caliber of firearms being fired, are exempt from the above requirements.
3. The property where the turkey shoot is located must be fenced, posted or otherwise restricted so that access to the site is controlled to insure the safety of contestants, spectators and the public at large.
4. Operating hours for turkey shoots located within or immediately adjacent to residentially zoned areas is restricted to the hours of between 12:00 p.m. and 11:00 p.m. Friday and Saturday.
5. A special event on Thanksgiving Thursday and Sunday shall be allowed from 2:00 to 7:00 p.m.
6. A permit for a turkey shoot will be valid only for the months of October, November and December of the year in which it is issued.
7. The equivalent of two off-street parking spaces per firing point must be provided. Use should be oriented away from inhabited areas.
8. The site should have sufficient pellet restraints placed behind each target.
9. The site should be suitable in size.

(Ord. No. 470, 11-26-01)

Section 4.2.12 - Solid waste processing facilities.

All solid waste processing facilities must meet the following requirements unless otherwise approved by the county:

1. Solid waste processing facilities shall be adjacent to or have direct access to roads which are of all weather construction and capable of withstanding anticipated load limits.
2. No solid waste processing unit shall extend closer than one hundred (100) feet to any property line.
3. The active waste handling area of a solid waste processing facility shall not extend closer than two hundred (200) feet to residences, schools, hospitals and recreational park areas.
4. The solid waste processing facility shall be located on a parcel containing a minimum of five (5) acres.
5. A Type 4 Buffer yard shall be installed along all property boundaries. All plants used to meet this requirement shall be evergreens.
6. All exterior storage of material shall be in sturdy containers or enclosures which are covered, secured, and maintained in good condition, or shall be baled or palletized. Storage containers for flammable material shall be constructed of nonflammable material.
7. The site shall be maintained free of litter and all other undesirable materials, and shall be

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cleaned of loose debris on a daily basis and shall be secured from unauthorized entry and removal of materials when attendants are not present.

8. Space shall be provided on site for vehicles to circulate, park, and deposit materials and solid waste.

9. All applicable permits shall be obtained from the SCDHEC and any other permitting agency and all the agency regulations shall be followed.

10. Solid waste processing facilities shall have direct access to either a collector or arterial street. Access roads and easements shall maintain a minimum travel surface of eighteen (18) feet and have a width of thirty (30) feet at the entrance intersection with a collector or arterial street, so as to accommodate truck traffic.

(Ord. No. 1073, § 6, 12-29-10)

Section 4.2.13 - Waste tires processing facilities (recycling).

All waste tire processing facilities must meet the following requirements unless otherwise approved by the county:

1. Waste tires processing facilities shall be adjacent to or have direct access to roads which are of all weather construction and capable of withstanding anticipated load limits.

2. No waste tires processing unit shall extend closer than one hundred (100) feet to any property line.

3. The active waste handling area of a waste tires processing facility shall not extend closer than two hundred (200) feet to residences, schools, hospitals and recreational park areas.

4. The waste tires processing facility shall be located on a parcel containing a minimum of five (5) acres.

5. A Type 4 Buffer yard shall be installed along all property boundaries. All plants used to meet this requirement shall be evergreens.

6. All exterior storage of material shall be in sturdy containers or enclosures which are covered, secured, and maintained in good condition, or shall be baled or palletized. Storage containers for flammable material shall be constructed of nonflammable material.

7. The site shall be maintained free of litter and all other undesirable materials, and shall be cleaned of loose debris on a daily basis and shall be secured from unauthorized entry and removal of materials when attendants are not present.

8. Space shall be provided on site for vehicles to circulate, park, and deposit materials and solid waste.

9. All applicable permits shall be obtained from the SCDHEC and any other permitting agency and all the agency regulations shall be followed.

10. Waste tires processing facilities shall have direct access to either a collector or arterial street. Access roads and easements shall maintain a minimum travel surface of eighteen (18) feet and

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have a width of thirty (30) feet at the entrance intersection with a collector or arterial street, so as to accommodate truck traffic.

(Ord. No. 1073, § 7, 12-29-10)

Section 4.2.14 - Composting facilities.

All composting facilities must meet the following requirements unless otherwise approved by the county:

1. Composting facilities shall be adjacent to or have direct access to roads which are of all weather construction and capable of withstanding anticipated load limits.
2. A fifty-foot minimum buffer shall be required between all property lines and compost pad or storage area.
3. A two hundred-foot minimum buffer shall be required between compost pad or storage area and residences or dwellings.
4. The composting facility shall be located on a parcel containing a minimum of five (5) acres.
5. A Type 4 Buffer yard shall be installed along all property boundaries. All plants used to meet this requirement shall be evergreens.
6. All exterior storage of materials, other than yard waste, shall be in sturdy containers or enclosures which are covered, secured, and maintained in good condition, or shall be baled or palletized. Storage containers for flammable material shall be constructed of nonflammable material.
7. The site shall be maintained free of litter and all other undesirable materials, and shall be cleaned of loose debris on a daily basis and shall be secured from unauthorized entry and removal of materials when attendants are not present.
8. Space shall be provided on site for vehicles to circulate, park, and deposit materials and solid waste.
9. All applicable permits shall be obtained from the SCDHEC and any other permitting agency and all the agency regulations shall be followed.
10. Composting facilities shall have direct access to either a collector or arterial street. Access roads and easements shall maintain a minimum travel surface of eighteen (18) feet and have a width of thirty (30) feet at the entrance intersection with a collector or arterial street, so as to accommodate truck traffic.

(Ord. No. 1073, § 8, 12-29-10)

APPENDIX E

Soundcalc Output – Average L-Peak Results for STS Ambient Locations

STS&PropResults-L-Peak Average.TXT
 GEOSONICS SOUND-CALC SOUND PROJECTIONS
 AT RECEIVER # 1 - STS-HBC -

PROJECT - HGMWC- L

Peak Average

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1	52	27	66	0	0	0	1
SOURCE #	2	51	26	66	0	0	0	1
SOURCE #	3	51	26	66	0	0	0	1
SOURCE #	4	43	20	59	0	0	0	0
SOURCE #	5	43	20	59	0	0	0	0
SOURCE #	6	43	20	59	0	0	0	0
SOURCE #	7	43	20	59	0	0	0	0
SOURCE #	8	43	20	59	0	0	0	0
SOURCE #	9	43	20	59	0	0	0	0
SOURCE #	10	35	19	63	0	0	0	2
SOURCE #	11	35	19	63	0	0	0	2
SOURCE #	12	35	19	63	0	0	0	2
SOURCE #	13	35	19	63	0	0	0	2
SOURCE #	14	35	19	63	0	0	0	2
SOURCE #	15	35	19	63	0	0	0	2
SOURCE #	16	49	35	72	0	0	0	4
SOURCE #	17	39	20	62	0	0	0	1
SOURCE #	18	39	20	62	0	0	0	1
SOURCE #	19	39	20	62	0	0	0	1
SOURCE #	20	39	20	62	0	0	0	1
SOURCE #	21	38	20	62	0	0	0	1
SOURCE #	22	39	20	62	0	0	0	1
SOURCE #	23	53	40	68	0	0	0	2
SOURCE #	24	45	22	60	0	0	0	1
SOURCE #	25	45	22	60	0	0	0	1
SOURCE #	26	45	22	60	0	0	0	1
SOURCE #	27	45	22	60	0	0	0	1
SOURCE #	28	44	22	60	0	0	0	1
SOURCE #	29	44	22	60	0	0	0	1
SOURCE #	30	59	47	62	0	0	0	1
SOURCE #	31	43	21	61	0	0	0	1
SOURCE #	32	43	21	61	0	0	0	1
SOURCE #	33	43	21	61	0	0	0	1
SOURCE #	34	43	21	61	0	0	0	1
SOURCE #	35	43	21	61	0	0	0	1
SOURCE #	36	43	21	61	0	0	0	1
SOURCE #	37	57	45	64	0	0	0	1
SOURCE #	38	40	23	70	0	0	0	1
SOURCE #	39	40	22	70	0	0	0	1
SOURCE #	40	40	22	70	0	0	0	1
SOURCE #	41	40	23	70	0	0	0	1
SOURCE #	42	40	23	70	0	0	0	1
SOURCE #	43	40	23	70	0	0	0	1
SOURCE #	44	48	28	64	0	0	0	0
SOURCE #	45	48	28	64	0	0	0	0
SOURCE #	46	48	28	64	0	0	0	0
SOURCE #	47	45	26	67	0	0	0	0
SOURCE #	48	45	26	67	0	0	0	0
SOURCE #	49	45	26	67	0	0	0	0
SOURCE #	50	35	19	63	0	0	0	2
SOURCE #	51	35	19	63	0	0	0	2
BACKGROUND		0	68					
TOTAL wo bkg		65	50					
TOTAL w bkg		65	68					

STS&PropResults-L-Peak Average.TXT
 TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	1 STS-HBC	76898	47837	527	
SOURCE #	1 Primary Crusher	79767	41378	548	7067
SOURCE #	2 SAG Mill	80714	41311	556	7559
SOURCE #	3 Ball Mill	80812	41287	556	7630
SOURCE #	4 Regrind Mill 1	80996	41228	559	7776
SOURCE #	5 Regrind Mill 2	81013	41223	559	7789
SOURCE #	6 Regrind Mill 3	81031	41219	559	7802
SOURCE #	7 Regrind Mill 4	80991	41208	559	7790
SOURCE #	8 Regrind Mill 5	81008	41204	559	7803
SOURCE #	9 Regrind Mill 6	81026	41199	559	7816
SOURCE #	10 ROSAHT 1	71900	35000	680	13776
SOURCE #	11 ROSAHT 2	71850	34950	680	13841
SOURCE #	12 ROSAHT 3	71800	34900	680	13906
SOURCE #	13 ROSADZ 1	71750	34850	680	13970
SOURCE #	14 ROSADZ 2	71700	34800	680	14035
SOURCE #	15 ROSADZ 3	71650	34750	680	14100
SOURCE #	16 ROSA BUA	71910	35010	675	13763
SOURCE #	17 JPHT 1	78200	39000	680	8933
SOURCE #	18 JPHT 2	78150	38950	680	8976
SOURCE #	19 JPHT 3	78100	38900	680	9018
SOURCE #	20 JPDZ 1	78050	38850	680	9061
SOURCE #	21 JPDZ 2	78000	38800	680	9105
SOURCE #	22 JPDZ3	78210	39010	680	8925
SOURCE #	23 JPBU	78210	39010	680	8925
SOURCE #	24 HOSAHT 1	77400	43400	720	4469
SOURCE #	25 HOSAHT 2	77350	43350	720	4513
SOURCE #	26 HOSAHT 3	77300	43300	720	4558
SOURCE #	27 HOSADZ 1	77250	43250	720	4604
SOURCE #	28 HOSADZ 2	77200	43200	720	4650
SOURCE #	29 HOSADZ 3	77150	43150	720	4697
SOURCE #	30 HOSABU	77410	43410	720	4460
SOURCE #	31 JOSAHHT 1	80600	43700	630	5552
SOURCE #	32 JOSAHHT 2	80550	43650	630	5556
SOURCE #	33 JOSAHHT 3	80500	43600	630	5562
SOURCE #	34 JOSADZ 1	80450	43550	630	5568
SOURCE #	35 JOSADZ 2	80400	43500	630	5575
SOURCE #	36 JOSADZ 3	80350	43450	630	5583
SOURCE #	37 JOSABU	80610	43710	630	5551
SOURCE #	38 CPDRILL 1	75500	33700	460	14206
SOURCE #	39 CPDRILL 2	75450	33650	460	14260
SOURCE #	40 CPDRILL 3	75400	33600	460	14315
SOURCE #	41 SPDRILL 1	74000	34800	480	13355
SOURCE #	42 SPDRILL 2	73950	34750	480	13415
SOURCE #	43 SPDRILL 3	73900	34700	480	13474
SOURCE #	44 SKPDRILL 1	75600	42100	420	5883
SOURCE #	45 SKPDRILL 2	75550	42050	420	5942
SOURCE #	46 SKPDRILL 3	75500	42000	420	6003
SOURCE #	47 LPDRILL 1	76900	39600	440	8237
SOURCE #	48 LPDRILL 2	76850	39550	440	8287
SOURCE #	49 LPDRILL 3	76800	39500	440	8338
SOURCE #	50 TSFHT	85300	37500	620	13321
SOURCE #	51 TSFDZ	85250	37450	620	13328

PROJECTED OCTAVE LEVELS:
 OCTAVE 31.5 63 125 250 500 1000 2K 4K 8000
 16K
 LINEAR 61 57 56 58 28 22 0 0 0
 0

STS&PropResults-L-Peak Average.TXT
 A-wt 22 31 40 49 24 22 1 1 -2
 -7
 □

GEOSONICS SOUND-CALC SOUND PROJECTIONS
 AT RECEIVER # 2 - STS-KIP -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	54	29	63	0	0	0	1
SOURCE # 2	54	29	63	0	0	0	1
SOURCE # 3	54	29	63	0	0	0	1
SOURCE # 4	46	20	58	0	0	0	0
SOURCE # 5	46	20	58	0	0	0	0
SOURCE # 6	46	20	58	0	0	0	0
SOURCE # 7	46	20	58	0	0	0	0
SOURCE # 8	46	20	58	0	0	0	0
SOURCE # 9	46	20	58	0	0	0	0
SOURCE # 10	40	20	62	0	0	0	1
SOURCE # 11	40	20	62	0	0	0	1
SOURCE # 12	40	20	62	0	0	0	1
SOURCE # 13	40	20	62	0	0	0	1
SOURCE # 14	40	20	62	0	0	0	1
SOURCE # 15	40	20	62	0	0	0	1
SOURCE # 16	54	41	67	0	0	0	2
SOURCE # 17	48	24	58	0	0	0	0
SOURCE # 18	48	24	58	0	0	0	0
SOURCE # 19	48	24	58	0	0	0	0
SOURCE # 20	48	24	58	0	0	0	0
SOURCE # 21	48	24	57	0	0	0	0
SOURCE # 22	48	24	58	0	0	0	0
SOURCE # 23	63	50	59	0	0	0	0
SOURCE # 24	40	20	62	0	0	0	1
SOURCE # 25	40	20	62	0	0	0	1
SOURCE # 26	40	20	62	0	0	0	1
SOURCE # 27	40	20	62	0	0	0	1
SOURCE # 28	40	20	62	0	0	0	1
SOURCE # 29	40	20	62	0	0	0	1
SOURCE # 30	54	42	67	0	0	0	2
SOURCE # 31	40	20	62	0	0	0	1
SOURCE # 32	40	20	62	0	0	0	1
SOURCE # 33	40	20	62	0	0	0	1
SOURCE # 34	40	20	62	0	0	0	1
SOURCE # 35	40	20	62	0	0	0	1
SOURCE # 36	40	20	62	0	0	0	1
SOURCE # 37	54	41	67	0	0	0	2
SOURCE # 38	50	30	62	0	0	0	0
SOURCE # 39	50	30	62	0	0	0	0
SOURCE # 40	50	30	62	0	0	0	0
SOURCE # 41	48	29	64	0	0	0	0
SOURCE # 42	48	29	64	0	0	0	0
SOURCE # 43	48	29	64	0	0	0	0
SOURCE # 44	46	27	65	0	0	0	0
SOURCE # 45	46	27	65	0	0	0	0
SOURCE # 46	46	27	65	0	0	0	0
SOURCE # 47	51	31	62	0	0	0	0
SOURCE # 48	51	31	62	0	0	0	0
SOURCE # 49	51	31	62	0	0	0	0
SOURCE # 50	42	21	61	0	0	0	1
SOURCE # 51	42	21	61	0	0	0	1
BACKGROUND	77	77					

□

STS&PropResults-L-Peak Average.TXT

TOTAL wo bkg 67 52
 TOTAL w bkg 77 77

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	2 STS-KIP	79441	36121	570	
SOURCE #	1 Primary Crusher	79767	41378	548	5267
SOURCE #	2 SAG Mill	80714	41311	556	5344
SOURCE #	3 Ball Mill	80812	41287	556	5345
SOURCE #	4 Regrind Mill 1	80996	41228	559	5338
SOURCE #	5 Regrind Mill 2	81013	41223	559	5338
SOURCE #	6 Regrind Mill 3	81031	41219	559	5340
SOURCE #	7 Regrind Mill 4	80991	41208	559	5317
SOURCE #	8 Regrind Mill 5	81008	41204	559	5319
SOURCE #	9 Regrind Mill 6	81026	41199	559	5319
SOURCE #	10 ROSAHT 1	71900	35000	680	7624
SOURCE #	11 ROSAHT 2	71850	34950	680	7681
SOURCE #	12 ROSAHT 3	71800	34900	680	7738
SOURCE #	13 ROSADZ 1	71750	34850	680	7796
SOURCE #	14 ROSADZ 2	71700	34800	680	7853
SOURCE #	15 ROSADZ 3	71650	34750	680	7911
SOURCE #	16 ROSA BUA	71910	35010	675	7613
SOURCE #	17 JPHT 1	78200	39000	680	3137
SOURCE #	18 JPHT 2	78150	38950	680	3111
SOURCE #	19 JPHT 3	78100	38900	680	3087
SOURCE #	20 JPDZ 1	78050	38850	680	3065
SOURCE #	21 JPDZ 2	78000	38800	680	3043
SOURCE #	22 JPDZ3	78210	39010	680	3142
SOURCE #	23 JPBU	78210	39010	680	3142
SOURCE #	24 HOSAHT 1	77400	43400	720	7561
SOURCE #	25 HOSAHT 2	77350	43350	720	7526
SOURCE #	26 HOSAHT 3	77300	43300	720	7492
SOURCE #	27 HOSADZ 1	77250	43250	720	7459
SOURCE #	28 HOSADZ 2	77200	43200	720	7426
SOURCE #	29 HOSADZ 3	77150	43150	720	7394
SOURCE #	30 HOSABU	77410	43410	720	7568
SOURCE #	31 JOSAHHT 1	80600	43700	630	7667
SOURCE #	32 JOSAHHT 2	80550	43650	630	7610
SOURCE #	33 JOSAHHT 3	80500	43600	630	7553
SOURCE #	34 JOSADZ 1	80450	43550	630	7497
SOURCE #	35 JOSADZ 2	80400	43500	630	7441
SOURCE #	36 JOSADZ 3	80350	43450	630	7385
SOURCE #	37 JOSABU	80610	43710	630	7678
SOURCE #	38 CPDRILL 1	75500	33700	460	4626
SOURCE #	39 CPDRILL 2	75450	33650	460	4695
SOURCE #	40 CPDRILL 3	75400	33600	460	4764
SOURCE #	41 SPDRILL 1	74000	34800	480	5599
SOURCE #	42 SPDRILL 2	73950	34750	480	5660
SOURCE #	43 SPDRILL 3	73900	34700	480	5721
SOURCE #	44 SKPDRILL 1	75600	42100	420	7108
SOURCE #	45 SKPDRILL 2	75550	42050	420	7093
SOURCE #	46 SKPDRILL 3	75500	42000	420	7079
SOURCE #	47 LPDRILL 1	76900	39600	440	4310
SOURCE #	48 LPDRILL 2	76850	39550	440	4299
SOURCE #	49 LPDRILL 3	76800	39500	440	4290
SOURCE #	50 TSFHT	85300	37500	620	6019
SOURCE #	51 TSFDZ	85250	37450	620	5959

PROJECTED OCTAVE LEVELS:

OCTAVE 31.5 63 125 250 500 1000 2K 4K 8000

STS&PropResults-L-Peak Average.TXT

16K
 LINEAR 64 60 59 60 31 26 0 0 0
 0
 A-wt 24 34 43 52 28 26 1 1 -2
 -7
 □

GEOSONICS SOUND-CALC SOUND PROJECTIONS
 AT RECEIVER # 3 - STS-Loc1 -

PROJECT - HGMWC

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	49	24	68	0	0	0	2	
SOURCE # 2	48	24	68	0	0	0	2	
SOURCE # 3	48	24	68	0	0	0	2	
SOURCE # 4	40	19	59	0	0	0	0	
SOURCE # 5	40	19	59	0	0	0	0	
SOURCE # 6	40	19	59	0	0	0	0	
SOURCE # 7	40	19	59	0	0	0	0	
SOURCE # 8	40	19	59	0	0	0	0	
SOURCE # 9	40	19	59	0	0	0	0	
SOURCE # 10	52	27	54	0	0	0	0	
SOURCE # 11	52	27	54	0	0	0	0	
SOURCE # 12	52	27	55	0	0	0	0	
SOURCE # 13	52	27	55	0	0	0	0	
SOURCE # 14	52	27	55	0	0	0	0	
SOURCE # 15	51	27	55	0	0	0	0	
SOURCE # 16	67	55	55	0	0	0	0	
SOURCE # 17	41	20	61	0	0	0	1	
SOURCE # 18	41	20	61	0	0	0	1	
SOURCE # 19	41	20	61	0	0	0	1	
SOURCE # 20	41	21	61	0	0	0	1	
SOURCE # 21	41	21	61	0	0	0	1	
SOURCE # 22	41	20	61	0	0	0	1	
SOURCE # 23	55	42	66	0	0	0	2	
SOURCE # 24	37	20	62	0	0	0	2	
SOURCE # 25	38	20	62	0	0	0	2	
SOURCE # 26	38	20	62	0	0	0	2	
SOURCE # 27	38	20	62	0	0	0	2	
SOURCE # 28	38	20	62	0	0	0	2	
SOURCE # 29	38	20	62	0	0	0	2	
SOURCE # 30	51	38	69	0	0	0	3	
SOURCE # 31	36	20	63	0	0	0	2	
SOURCE # 32	36	20	63	0	0	0	2	
SOURCE # 33	36	20	62	0	0	0	2	
SOURCE # 34	36	20	62	0	0	0	2	
SOURCE # 35	36	20	62	0	0	0	2	
SOURCE # 36	36	20	62	0	0	0	2	
SOURCE # 37	50	36	71	0	0	0	3	
SOURCE # 38	57	38	55	0	0	0	0	
SOURCE # 39	57	38	55	0	0	0	0	
SOURCE # 40	58	38	55	0	0	0	0	
SOURCE # 41	63	43	50	0	0	0	0	
SOURCE # 42	63	44	50	0	0	0	0	
SOURCE # 43	64	44	49	0	0	0	0	
SOURCE # 44	44	26	67	0	0	0	0	
SOURCE # 45	45	26	67	0	0	0	0	
SOURCE # 46	45	26	67	0	0	0	0	
SOURCE # 47	47	27	65	0	0	0	0	
SOURCE # 48	47	28	65	0	0	0	0	
SOURCE # 49	47	28	65	0	0	0	0	
SOURCE # 50	36	20	63	0	0	0	2	
SOURCE # 51	36	20	63	0	0	0	2	

STS&PropResults-L-Peak Average.TXT
 BACKGROUND 0 57
 TOTAL wo bkg 72 56
 TOTAL w bkg 72 60

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 3	STS-Loc1	73466	33832	475	
SOURCE # 1	Primary Crusher	79767	41378	548	9831
SOURCE # 2	SAG Mill	80714	41311	556	10416
SOURCE # 3	Ball Mill	80812	41287	556	10467
SOURCE # 4	Regrind Mill 1	80996	41228	559	10555
SOURCE # 5	Regrind Mill 2	81013	41223	559	10563
SOURCE # 6	Regrind Mill 3	81031	41219	559	10573
SOURCE # 7	Regrind Mill 4	80991	41208	559	10537
SOURCE # 8	Regrind Mill 5	81008	41204	559	10546
SOURCE # 9	Regrind Mill 6	81026	41199	559	10556
SOURCE # 10	ROSAHT 1	71900	35000	680	1964
SOURCE # 11	ROSAHT 2	71850	34950	680	1975
SOURCE # 12	ROSAHT 3	71800	34900	680	1989
SOURCE # 13	ROSADZ 1	71750	34850	680	2005
SOURCE # 14	ROSADZ 2	71700	34800	680	2024
SOURCE # 15	ROSADZ 3	71650	34750	680	2045
SOURCE # 16	ROSA BUA	71910	35010	675	1961
SOURCE # 17	JPHT 1	78200	39000	680	7011
SOURCE # 18	JPHT 2	78150	38950	680	6940
SOURCE # 19	JPHT 3	78100	38900	680	6870
SOURCE # 20	JPDZ 1	78050	38850	680	6799
SOURCE # 21	JPDZ 2	78000	38800	680	6729
SOURCE # 22	JPDZ3	78210	39010	680	7025
SOURCE # 23	JPBU	78210	39010	680	7025
SOURCE # 24	HOSAHT 1	77400	43400	720	10348
SOURCE # 25	HOSAHT 2	77350	43350	720	10282
SOURCE # 26	HOSAHT 3	77300	43300	720	10217
SOURCE # 27	HOSADZ 1	77250	43250	720	10152
SOURCE # 28	HOSADZ 2	77200	43200	720	10087
SOURCE # 29	HOSADZ 3	77150	43150	720	10022
SOURCE # 30	HOSABU	77410	43410	720	10361
SOURCE # 31	JOSAHT 1	80600	43700	630	12177
SOURCE # 32	JOSAHT 2	80550	43650	630	12107
SOURCE # 33	JOSAHT 3	80500	43600	630	12038
SOURCE # 34	JOSADZ 1	80450	43550	630	11968
SOURCE # 35	JOSADZ 2	80400	43500	630	11898
SOURCE # 36	JOSADZ 3	80350	43450	630	11828
SOURCE # 37	JOSABU	80610	43710	630	12191
SOURCE # 38	CPDRILL 1	75500	33700	460	2038
SOURCE # 39	CPDRILL 2	75450	33650	460	1992
SOURCE # 40	CPDRILL 3	75400	33600	460	1947
SOURCE # 41	SPDRILL 1	74000	34800	480	1105
SOURCE # 42	SPDRILL 2	73950	34750	480	1037
SOURCE # 43	SPDRILL 3	73900	34700	480	970
SOURCE # 44	SKPDRILL 1	75600	42100	420	8539
SOURCE # 45	SKPDRILL 2	75550	42050	420	8478
SOURCE # 46	SKPDRILL 3	75500	42000	420	8417
SOURCE # 47	LPDRILL 1	76900	39600	440	6712
SOURCE # 48	LPDRILL 2	76850	39550	440	6644
SOURCE # 49	LPDRILL 3	76800	39500	440	6575
SOURCE # 50	TSFHT	85300	37500	620	12390
SOURCE # 51	TSFDZ	85250	37450	620	12327

STS&PropResults-L-Peak Average.TXT

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	66	67	66	64	36	32	11	0	0
0									
A-wt	26	41	50	55	33	32	12	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 4 - STS-Loc3 -

PROJECT - HGMWC

CONTRIBUTOR			SPL		DBA ATTENUATION FROM REF. DISTANCE				
			DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1		52	27	65	0	0	0	1
SOURCE #	2		51	26	66	0	0	0	1
SOURCE #	3		51	26	66	0	0	0	1
SOURCE #	4		43	20	59	0	0	0	0
SOURCE #	5		43	20	59	0	0	0	0
SOURCE #	6		43	20	59	0	0	0	0
SOURCE #	7		43	20	59	0	0	0	0
SOURCE #	8		43	20	59	0	0	0	0
SOURCE #	9		43	20	59	0	0	0	0
SOURCE #	10		45	22	60	0	0	0	1
SOURCE #	11		45	22	60	0	0	0	1
SOURCE #	12		45	22	60	0	0	0	1
SOURCE #	13		44	22	60	0	0	0	1
SOURCE #	14		44	22	60	0	0	0	1
SOURCE #	15		44	22	60	0	0	0	1
SOURCE #	16		60	47	62	0	0	0	1
SOURCE #	17		44	22	60	0	0	0	1
SOURCE #	18		44	22	60	0	0	0	1
SOURCE #	19		44	22	60	0	0	0	1
SOURCE #	20		44	22	60	0	0	0	1
SOURCE #	21		44	22	60	0	0	0	1
SOURCE #	22		44	22	60	0	0	0	1
SOURCE #	23		59	46	63	0	0	0	1
SOURCE #	24		42	21	61	0	0	0	1
SOURCE #	25		43	21	61	0	0	0	1
SOURCE #	26		43	21	61	0	0	0	1
SOURCE #	27		43	21	61	0	0	0	1
SOURCE #	28		43	21	61	0	0	0	1
SOURCE #	29		43	21	61	0	0	0	1
SOURCE #	30		57	44	65	0	0	0	1
SOURCE #	31		39	20	62	0	0	0	1
SOURCE #	32		39	20	62	0	0	0	1
SOURCE #	33		39	20	62	0	0	0	1
SOURCE #	34		39	20	62	0	0	0	1
SOURCE #	35		39	20	62	0	0	0	1
SOURCE #	36		39	20	62	0	0	0	1
SOURCE #	37		53	40	68	0	0	0	2
SOURCE #	38		48	29	64	0	0	0	0
SOURCE #	39		48	29	64	0	0	0	0
SOURCE #	40		48	28	64	0	0	0	0
SOURCE #	41		50	31	62	0	0	0	0
SOURCE #	42		50	31	62	0	0	0	0
SOURCE #	43		50	31	62	0	0	0	0
SOURCE #	44		52	32	60	0	0	0	0
SOURCE #	45		52	33	60	0	0	0	0
SOURCE #	46		52	33	60	0	0	0	0
SOURCE #	47		52	33	60	0	0	0	0
SOURCE #	48		52	33	60	0	0	0	0

STS&PropResults-L-Peak Average.TXT							
SOURCE # 49	53	33	60	0	0	0	0
SOURCE # 50	36	20	62	0	0	0	2
SOURCE # 51	36	20	62	0	0	0	2
BACKGROUND	0	52					

□

TOTAL wo bkg	67	52
TOTAL w bkg	67	55

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 4	STS-Loc3	73386	39149	525	
SOURCE # 1	Primary Crusher	79767	41378	548	6759
SOURCE # 2	SAG Mill	80714	41311	556	7641
SOURCE # 3	Ball Mill	80812	41287	556	7728
SOURCE # 4	Regrind Mill 1	80996	41228	559	7888
SOURCE # 5	Regrind Mill 2	81013	41223	559	7904
SOURCE # 6	Regrind Mill 3	81031	41219	559	7920
SOURCE # 7	Regrind Mill 4	80991	41208	559	7878
SOURCE # 8	Regrind Mill 5	81008	41204	559	7894
SOURCE # 9	Regrind Mill 6	81026	41199	559	7910
SOURCE # 10	ROSAHT 1	71900	35000	680	4409
SOURCE # 11	ROSAHT 2	71850	34950	680	4473
SOURCE # 12	ROSAHT 3	71800	34900	680	4538
SOURCE # 13	ROSADZ 1	71750	34850	680	4602
SOURCE # 14	ROSADZ 2	71700	34800	680	4666
SOURCE # 15	ROSADZ 3	71650	34750	680	4731
SOURCE # 16	ROSA BUA	71910	35010	675	4396
SOURCE # 17	JPHT 1	78200	39000	680	4818
SOURCE # 18	JPHT 2	78150	38950	680	4770
SOURCE # 19	JPHT 3	78100	38900	680	4723
SOURCE # 20	JPDZ 1	78050	38850	680	4676
SOURCE # 21	JPDZ 2	78000	38800	680	4629
SOURCE # 22	JPDZ3	78210	39010	680	4828
SOURCE # 23	JPBU	78210	39010	680	4828
SOURCE # 24	HOSAHT 1	77400	43400	720	5849
SOURCE # 25	HOSAHT 2	77350	43350	720	5779
SOURCE # 26	HOSAHT 3	77300	43300	720	5708
SOURCE # 27	HOSADZ 1	77250	43250	720	5637
SOURCE # 28	HOSADZ 2	77200	43200	720	5567
SOURCE # 29	HOSADZ 3	77150	43150	720	5496
SOURCE # 30	HOSABU	77410	43410	720	5864
SOURCE # 31	JOSAHT 1	80600	43700	630	8530
SOURCE # 32	JOSAHT 2	80550	43650	630	8461
SOURCE # 33	JOSAHT 3	80500	43600	630	8392
SOURCE # 34	JOSADZ 1	80450	43550	630	8323
SOURCE # 35	JOSADZ 2	80400	43500	630	8254
SOURCE # 36	JOSADZ 3	80350	43450	630	8185
SOURCE # 37	JOSABU	80610	43710	630	8544
SOURCE # 38	CPDRILL 1	75500	33700	460	5845
SOURCE # 39	CPDRILL 2	75450	33650	460	5873
SOURCE # 40	CPDRILL 3	75400	33600	460	5903
SOURCE # 41	SPDRILL 1	74000	34800	480	4392
SOURCE # 42	SPDRILL 2	73950	34750	480	4435
SOURCE # 43	SPDRILL 3	73900	34700	480	4478
SOURCE # 44	SKPDRILL 1	75600	42100	420	3690
SOURCE # 45	SKPDRILL 2	75550	42050	420	3620
SOURCE # 46	SKPDRILL 3	75500	42000	420	3550
SOURCE # 47	LPDRILL 1	76900	39600	440	3543
SOURCE # 48	LPDRILL 2	76850	39550	440	3488

STS&PropResults-L-Peak Average.TXT

SOURCE # 49	LPDRILL 3	76800	39500	440	3433
SOURCE # 50	TSFHT	85300	37500	620	12027
SOURCE # 51	TSFDZ	85250	37450	620	11985

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2k	4k	8000
16K									
LINEAR	63	61	60	59	30	24	0	0	0
0									
A-wt	23	35	44	51	27	24	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 5 - STS-HouseSO/GMH -

PROJECT - HGMWC

CONTRIBUTOR	SPL	DBA	DBA	ATTENUATION FROM REF. DISTANCE	ATMOS.
	DB(Lin)		SPHERE	PATH /1000 Ft	BARRIERS
SOURCE # 1	56	31	62	0	0
SOURCE # 2	57	32	61	0	0
SOURCE # 3	57	32	60	0	0
SOURCE # 4	50	22	57	0	0
SOURCE # 5	50	22	57	0	0
SOURCE # 6	50	22	57	0	0
SOURCE # 7	50	21	57	0	0
SOURCE # 8	50	21	57	0	0
SOURCE # 9	50	22	57	0	0
SOURCE # 10	37	20	62	0	0
SOURCE # 11	37	20	62	0	0
SOURCE # 12	36	20	62	0	0
SOURCE # 13	36	20	62	0	0
SOURCE # 14	36	20	62	0	0
SOURCE # 15	36	20	62	0	0
SOURCE # 16	51	37	70	0	0
SOURCE # 17	44	22	60	0	0
SOURCE # 18	44	22	60	0	0
SOURCE # 19	44	22	60	0	0
SOURCE # 20	44	22	60	0	0
SOURCE # 21	44	22	60	0	0
SOURCE # 22	44	22	60	0	0
SOURCE # 23	59	47	63	0	0
SOURCE # 24	40	20	62	0	0
SOURCE # 25	40	20	62	0	0
SOURCE # 26	40	20	62	0	0
SOURCE # 27	40	20	62	0	0
SOURCE # 28	40	20	62	0	0
SOURCE # 29	40	20	62	0	0
SOURCE # 30	55	42	67	0	0
SOURCE # 31	42	21	61	0	0
SOURCE # 32	42	21	61	0	0
SOURCE # 33	42	21	61	0	0
SOURCE # 34	42	21	61	0	0
SOURCE # 35	42	21	61	0	0
SOURCE # 36	42	21	61	0	0
SOURCE # 37	57	44	65	0	0
SOURCE # 38	45	26	67	0	0
SOURCE # 39	44	26	67	0	0
SOURCE # 40	44	26	67	0	0
SOURCE # 41	44	25	67	0	0
SOURCE # 42	44	25	67	0	0
SOURCE # 43	44	25	68	0	0
SOURCE # 44	45	26	67	0	0
SOURCE # 45	45	26	67	0	0

		STS&PropResults-L-Peak		Average.TXT			
SOURCE #	46	45	26	67	0	0	0
SOURCE #	47	48	28	64	0	0	0
SOURCE #	48	48	28	64	0	0	0
SOURCE #	49	47	28	64	0	0	0
SOURCE #	50	49	25	57	0	0	0
SOURCE #	51	50	25	56	0	0	0
BACKGROUND		0	55				

□

TOTAL wo bkg	67	50
TOTAL w bkg	67	56

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

RECEIVER #		X	Y	Z	DST
5	STS-HouseSO/GMH	82759	38125	560	
1	Primary Crusher	79767	41378	548	4419
2	SAG Mill	80714	41311	556	3786
3	Ball Mill	80812	41287	556	3713
4	Regrind Mill 1	80996	41228	559	3568
5	Regrind Mill 2	81013	41223	559	3556
6	Regrind Mill 3	81031	41219	559	3543
7	Regrind Mill 4	80991	41208	559	3553
8	Regrind Mill 5	81008	41204	559	3542
9	Regrind Mill 6	81026	41199	559	3528
10	ROSAHT 1	71900	35000	680	11300
11	ROSAHT 2	71850	34950	680	11362
12	ROSAHT 3	71800	34900	680	11424
13	ROSADZ 1	71750	34850	680	11486
14	ROSADZ 2	71700	34800	680	11548
15	ROSADZ 3	71650	34750	680	11610
16	ROSA BUA	71910	35010	675	11287
17	JPHT 1	78200	39000	680	4643
18	JPHT 2	78150	38950	680	4683
19	JPHT 3	78100	38900	680	4724
20	JPDZ 1	78050	38850	680	4765
21	JPDZ 2	78000	38800	680	4808
22	JPDZ3	78210	39010	680	4635
23	JPBU	78210	39010	680	4635
24	HOSAHT 1	77400	43400	720	7521
25	HOSAHT 2	77350	43350	720	7522
26	HOSAHT 3	77300	43300	720	7523
27	HOSADZ 1	77250	43250	720	7525
28	HOSADZ 2	77200	43200	720	7528
29	HOSADZ 3	77150	43150	720	7532
30	HOSABU	77410	43410	720	7521
31	JOSAHT 1	80600	43700	630	5978
32	JOSAHT 2	80550	43650	630	5950
33	JOSAHT 3	80500	43600	630	5923
34	JOSADZ 1	80450	43550	630	5896
35	JOSADZ 2	80400	43500	630	5870
36	JOSADZ 3	80350	43450	630	5844
37	JOSABU	80610	43710	630	5984
38	CPDRILL 1	75500	33700	460	8501
39	CPDRILL 2	75450	33650	460	8570
40	CPDRILL 3	75400	33600	460	8639
41	SPDRILL 1	74000	34800	480	9369
42	SPDRILL 2	73950	34750	480	9433
43	SPDRILL 3	73900	34700	480	9498
44	SKPDRILL 1	75600	42100	420	8189
45	SKPDRILL 2	75550	42050	420	8209

STS&PropResults-L-Peak Average.TXT

SOURCE # 46	SKPDRILL 3	75500	42000	420	8229
SOURCE # 47	LPDRILL 1	76900	39600	440	6043
SOURCE # 48	LPDRILL 2	76850	39550	440	6079
SOURCE # 49	LPDRILL 3	76800	39500	440	6116
SOURCE # 50	TSFHT	85300	37500	620	2617
SOURCE # 51	TSFDZ	85250	37450	620	2581

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	64	60	57	58	30	22	0	0	0
0									
A-wt	25	33	41	49	26	22	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 6 - STS-HouseGMH -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA	ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA		SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	59	35	58	0	0	0	0	0
SOURCE # 2	62	37	56	0	0	0	0	0
SOURCE # 3	62	37	56	0	0	0	0	0
SOURCE # 4	55	24	54	0	0	0	0	0
SOURCE # 5	55	24	54	0	0	0	0	0
SOURCE # 6	55	24	54	0	0	0	0	0
SOURCE # 7	55	24	54	0	0	0	0	0
SOURCE # 8	55	24	54	0	0	0	0	0
SOURCE # 9	55	24	54	0	0	0	0	0
SOURCE # 10	37	20	62	0	0	0	0	2
SOURCE # 11	37	20	62	0	0	0	0	2
SOURCE # 12	37	20	62	0	0	0	0	2
SOURCE # 13	37	20	62	0	0	0	0	2
SOURCE # 14	37	20	62	0	0	0	0	2
SOURCE # 15	37	20	62	0	0	0	0	2
SOURCE # 16	51	37	70	0	0	0	0	3
SOURCE # 17	46	23	59	0	0	0	0	0
SOURCE # 18	46	23	59	0	0	0	0	0
SOURCE # 19	46	23	59	0	0	0	0	0
SOURCE # 20	46	23	59	0	0	0	0	0
SOURCE # 21	46	23	59	0	0	0	0	0
SOURCE # 22	47	23	59	0	0	0	0	0
SOURCE # 23	61	49	60	0	0	0	0	1
SOURCE # 24	42	21	61	0	0	0	0	1
SOURCE # 25	42	21	61	0	0	0	0	1
SOURCE # 26	42	21	61	0	0	0	0	1
SOURCE # 27	42	21	61	0	0	0	0	1
SOURCE # 28	42	21	61	0	0	0	0	1
SOURCE # 29	42	21	61	0	0	0	0	1
SOURCE # 30	57	44	65	0	0	0	0	1
SOURCE # 31	45	22	60	0	0	0	0	1
SOURCE # 32	45	22	60	0	0	0	0	1
SOURCE # 33	45	22	60	0	0	0	0	1
SOURCE # 34	45	22	60	0	0	0	0	1
SOURCE # 35	45	22	60	0	0	0	0	1
SOURCE # 36	45	22	60	0	0	0	0	0
SOURCE # 37	59	47	62	0	0	0	0	1
SOURCE # 38	45	26	67	0	0	0	0	0
SOURCE # 39	44	26	67	0	0	0	0	0
SOURCE # 40	44	26	67	0	0	0	0	0
SOURCE # 41	44	25	67	0	0	0	0	1
SOURCE # 42	44	25	67	0	0	0	0	1

STS&PropResults-L-Peak Average.TXT							
SOURCE # 43	44	25	67	0	0	0	1
SOURCE # 44	47	27	65	0	0	0	0
SOURCE # 45	47	27	65	0	0	0	0
SOURCE # 46	46	27	65	0	0	0	0
SOURCE # 47	49	30	63	0	0	0	0
SOURCE # 48	49	30	63	0	0	0	0
SOURCE # 49	49	30	63	0	0	0	0
SOURCE # 50	46	23	59	0	0	0	0
SOURCE # 51	46	23	59	0	0	0	0
BACKGROUND	0	49					
TOTAL wo bkg	70	53					
TOTAL w bkg	70	54					
TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3	

COORDINATE LOCATIONS (Ft)				X	Y	Z	DST
RECEIVER # 6	STS-HouseGMH			81823	39370	547	
SOURCE # 1	Primary Crusher			79767	41378	548	2873
SOURCE # 2	SAG Mill			80714	41311	556	2236
SOURCE # 3	Ball Mill			80812	41287	556	2167
SOURCE # 4	Regrind Mill 1			80996	41228	559	2033
SOURCE # 5	Regrind Mill 2			81013	41223	559	2022
SOURCE # 6	Regrind Mill 3			81031	41219	559	2011
SOURCE # 7	Regrind Mill 4			80991	41208	559	2017
SOURCE # 8	Regrind Mill 5			81008	41204	559	2006
SOURCE # 9	Regrind Mill 6			81026	41199	559	1995
SOURCE # 10	ROSAHT 1			71900	35000	680	10843
SOURCE # 11	ROSAHT 2			71850	34950	680	10909
SOURCE # 12	ROSAHT 3			71800	34900	680	10975
SOURCE # 13	ROSADZ 1			71750	34850	680	11041
SOURCE # 14	ROSADZ 2			71700	34800	680	11107
SOURCE # 15	ROSADZ 3			71650	34750	680	11173
SOURCE # 16	ROSA BUA			71910	35010	675	10830
SOURCE # 17	JPHT 1			78200	39000	680	3644
SOURCE # 18	JPHT 2			78150	38950	680	3699
SOURCE # 19	JPHT 3			78100	38900	680	3754
SOURCE # 20	JPDZ 1			78050	38850	680	3811
SOURCE # 21	JPDZ 2			78000	38800	680	3867
SOURCE # 22	JPDZ3			78210	39010	680	3633
SOURCE # 23	JPBU			78210	39010	680	3633
SOURCE # 24	HOSAHT 1			77400	43400	720	5986
SOURCE # 25	HOSAHT 2			77350	43350	720	5989
SOURCE # 26	HOSAHT 3			77300	43300	720	5994
SOURCE # 27	HOSADZ 1			77250	43250	720	5999
SOURCE # 28	HOSADZ 2			77200	43200	720	6005
SOURCE # 29	HOSADZ 3			77150	43150	720	6012
SOURCE # 30	HOSABU			77410	43410	720	5985
SOURCE # 31	JOSAHT 1			80600	43700	630	4500
SOURCE # 32	JOSAHT 2			80550	43650	630	4466
SOURCE # 33	JOSAHT 3			80500	43600	630	4432
SOURCE # 34	JOSADZ 1			80450	43550	630	4400
SOURCE # 35	JOSADZ 2			80400	43500	630	4369
SOURCE # 36	JOSADZ 3			80350	43450	630	4338
SOURCE # 37	JOSABU			80610	43710	630	4507
SOURCE # 38	CPDRILL 1			75500	33700	460	8493
SOURCE # 39	CPDRILL 2			75450	33650	460	8563
SOURCE # 40	CPDRILL 3			75400	33600	460	8634
SOURCE # 41	SPDRILL 1			74000	34800	480	9060
SOURCE # 42	SPDRILL 2			73950	34750	480	9128

STS&PropResults-L-Peak Average.TXT

SOURCE # 43	SPDRILL 3	73900	34700	480	9197
SOURCE # 44	SKPDRILL 1	75600	42100	420	6796
SOURCE # 45	SKPDRILL 2	75550	42050	420	6822
SOURCE # 46	SKPDRILL 3	75500	42000	420	6849
SOURCE # 47	LPDRILL 1	76900	39600	440	4929
SOURCE # 48	LPDRILL 2	76850	39550	440	4977
SOURCE # 49	LPDRILL 3	76800	39500	440	5025
SOURCE # 50	TSFHT	85300	37500	620	3948
SOURCE # 51	TSFDZ	85250	37450	620	3928

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2k	4k	8000
16K									
LINEAR	68	63	59	60	34	26	2	0	0
0									
A-wt	28	37	43	52	30	26	3	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 7 - STS-GMH-Rt265 -

PROJECT - HGMWC

CONTRIBUTOR	SPL	DBA	DBA	SPHERE	PATH	ATTENUATION FROM REF.	DISTANCE	ATMOS.
	DB(Lin)				/1000 Ft	BARRIERS		
SOURCE # 1	51	26	66	0	0	0	1	
SOURCE # 2	52	27	65	0	0	0	1	
SOURCE # 3	52	27	65	0	0	0	1	
SOURCE # 4	45	20	59	0	0	0	0	
SOURCE # 5	45	20	59	0	0	0	0	
SOURCE # 6	45	20	59	0	0	0	0	
SOURCE # 7	45	20	58	0	0	0	0	
SOURCE # 8	45	20	58	0	0	0	0	
SOURCE # 9	45	20	58	0	0	0	0	
SOURCE # 10	33	19	63	0	0	0	2	
SOURCE # 11	33	19	63	0	0	0	2	
SOURCE # 12	33	19	63	0	0	0	2	
SOURCE # 13	33	19	63	0	0	0	2	
SOURCE # 14	33	19	63	0	0	0	2	
SOURCE # 15	33	19	63	0	0	0	2	
SOURCE # 16	47	33	73	0	0	0	4	
SOURCE # 17	38	20	62	0	0	0	1	
SOURCE # 18	38	20	62	0	0	0	1	
SOURCE # 19	38	20	62	0	0	0	1	
SOURCE # 20	38	20	62	0	0	0	1	
SOURCE # 21	38	20	62	0	0	0	1	
SOURCE # 22	39	20	62	0	0	0	1	
SOURCE # 23	53	39	68	0	0	0	2	
SOURCE # 24	37	20	62	0	0	0	2	
SOURCE # 25	37	20	62	0	0	0	2	
SOURCE # 26	37	20	62	0	0	0	2	
SOURCE # 27	37	20	62	0	0	0	2	
SOURCE # 28	37	20	62	0	0	0	2	
SOURCE # 29	37	20	62	0	0	0	2	
SOURCE # 30	51	38	70	0	0	0	3	
SOURCE # 31	40	20	62	0	0	0	1	
SOURCE # 32	40	20	62	0	0	0	1	
SOURCE # 33	40	20	62	0	0	0	1	
SOURCE # 34	40	20	62	0	0	0	1	
SOURCE # 35	40	20	62	0	0	0	1	
SOURCE # 36	40	20	62	0	0	0	1	
SOURCE # 37	54	41	67	0	0	0	2	
SOURCE # 38	40	23	70	0	0	0	1	
SOURCE # 39	40	23	70	0	0	0	1	

		STS&PropResults-L-Peak		Average.TXT			
SOURCE # 40	40	23	70	0	0	0	1
SOURCE # 41	40	22	70	0	0	0	1
SOURCE # 42	40	22	70	0	0	0	1
SOURCE # 43	40	22	70	0	0	0	1
SOURCE # 44	41	23	69	0	0	0	1
SOURCE # 45	41	23	69	0	0	0	1
SOURCE # 46	41	23	69	0	0	0	1
SOURCE # 47	43	24	68	0	0	0	1
SOURCE # 48	43	24	68	0	0	0	1
SOURCE # 49	43	24	68	0	0	0	1
SOURCE # 50	48	24	58	0	0	0	0
SOURCE # 51	48	24	58	0	0	0	0
BACKGROUND	8	58					

□

TOTAL wo bkg	62	46
TOTAL w bkg	62	58

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 7	STS-GMH-Rt265	87322	39946	568	
SOURCE # 1	Primary Crusher	79767	41378	548	7689
SOURCE # 2	SAG Mill	80714	41311	556	6747
SOURCE # 3	Ball Mill	80812	41287	556	6646
SOURCE # 4	Regrind Mill 1	80996	41228	559	6454
SOURCE # 5	Regrind Mill 2	81013	41223	559	6436
SOURCE # 6	Regrind Mill 3	81031	41219	559	6418
SOURCE # 7	Regrind Mill 4	80991	41208	559	6455
SOURCE # 8	Regrind Mill 5	81008	41204	559	6438
SOURCE # 9	Regrind Mill 6	81026	41199	559	6419
SOURCE # 10	ROSAHT 1	71900	35000	680	16196
SOURCE # 11	ROSAHT 2	71850	34950	680	16259
SOURCE # 12	ROSAHT 3	71800	34900	680	16322
SOURCE # 13	ROSADZ 1	71750	34850	680	16385
SOURCE # 14	ROSADZ 2	71700	34800	680	16448
SOURCE # 15	ROSADZ 3	71650	34750	680	16511
SOURCE # 16	ROSA BUA	71910	35010	675	16183
SOURCE # 17	JPHT 1	78200	39000	680	9171
SOURCE # 18	JPHT 2	78150	38950	680	9226
SOURCE # 19	JPHT 3	78100	38900	680	9281
SOURCE # 20	JPDZ 1	78050	38850	680	9337
SOURCE # 21	JPDZ 2	78000	38800	680	9392
SOURCE # 22	JPDZ3	78210	39010	680	9160
SOURCE # 23	JPBU	78210	39010	680	9160
SOURCE # 24	HOSAHT 1	77400	43400	720	10507
SOURCE # 25	HOSAHT 2	77350	43350	720	10538
SOURCE # 26	HOSAHT 3	77300	43300	720	10569
SOURCE # 27	HOSADZ 1	77250	43250	720	10601
SOURCE # 28	HOSADZ 2	77200	43200	720	10633
SOURCE # 29	HOSADZ 3	77150	43150	720	10665
SOURCE # 30	HOSABU	77410	43410	720	10500
SOURCE # 31	JOSAHT 1	80600	43700	630	7699
SOURCE # 32	JOSAHT 2	80550	43650	630	7719
SOURCE # 33	JOSAHT 3	80500	43600	630	7739
SOURCE # 34	JOSADZ 1	80450	43550	630	7759
SOURCE # 35	JOSADZ 2	80400	43500	630	7781
SOURCE # 36	JOSADZ 3	80350	43450	630	7803
SOURCE # 37	JOSABU	80610	43710	630	7695
SOURCE # 38	CPDRILL 1	75500	33700	460	13371
SOURCE # 39	CPDRILL 2	75450	33650	460	13438

STS&PropResults-L-Peak Average.TXT

SOURCE # 40	CPDRILL 3	75400	33600	460	13506
SOURCE # 41	SPDRILL 1	74000	34800	480	14281
SOURCE # 42	SPDRILL 2	73950	34750	480	14346
SOURCE # 43	SPDRILL 3	73900	34700	480	14411
SOURCE # 44	SKPDRILL 1	75600	42100	420	11919
SOURCE # 45	SKPDRILL 2	75550	42050	420	11959
SOURCE # 46	SKPDRILL 3	75500	42000	420	12000
SOURCE # 47	LPDRILL 1	76900	39600	440	10428
SOURCE # 48	LPDRILL 2	76850	39550	440	10480
SOURCE # 49	LPDRILL 3	76800	39500	440	10532
SOURCE # 50	TSFHT	85300	37500	620	3174
SOURCE # 51	TSFDZ	85250	37450	620	3244

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	60	55	53	53	24	14	0	0	0
0									
A-wt	20	29	36	44	20	14	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 8 - STS-SOR219 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA	DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA		SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	55	30	62	0	0	0	1	
SOURCE # 2	57	32	61	0	0	0	0	
SOURCE # 3	57	32	61	0	0	0	0	
SOURCE # 4	49	21	57	0	0	0	0	
SOURCE # 5	49	21	57	0	0	0	0	
SOURCE # 6	49	21	57	0	0	0	0	
SOURCE # 7	49	21	57	0	0	0	0	
SOURCE # 8	49	21	57	0	0	0	0	
SOURCE # 9	49	21	57	0	0	0	0	
SOURCE # 10	34	19	63	0	0	0	2	
SOURCE # 11	34	19	63	0	0	0	2	
SOURCE # 12	34	19	63	0	0	0	2	
SOURCE # 13	34	19	63	0	0	0	2	
SOURCE # 14	34	19	63	0	0	0	2	
SOURCE # 15	34	19	63	0	0	0	2	
SOURCE # 16	48	34	73	0	0	0	4	
SOURCE # 17	40	20	61	0	0	0	1	
SOURCE # 18	40	20	62	0	0	0	1	
SOURCE # 19	40	20	62	0	0	0	1	
SOURCE # 20	40	20	62	0	0	0	1	
SOURCE # 21	40	20	62	0	0	0	1	
SOURCE # 22	40	20	62	0	0	0	1	
SOURCE # 23	55	42	67	0	0	0	2	
SOURCE # 24	41	21	61	0	0	0	1	
SOURCE # 25	41	21	61	0	0	0	1	
SOURCE # 26	41	21	61	0	0	0	1	
SOURCE # 27	41	21	61	0	0	0	1	
SOURCE # 28	41	21	61	0	0	0	1	
SOURCE # 29	41	21	61	0	0	0	1	
SOURCE # 30	56	43	66	0	0	0	2	
SOURCE # 31	47	24	58	0	0	0	0	
SOURCE # 32	47	24	58	0	0	0	0	
SOURCE # 33	47	23	58	0	0	0	0	
SOURCE # 34	47	23	58	0	0	0	0	
SOURCE # 35	47	23	59	0	0	0	0	
SOURCE # 36	47	23	59	0	0	0	0	

STS&PropResults-L-Peak Average.TXT							
SOURCE # 37	62	50	60	0	0	0	1
SOURCE # 38	41	23	69	0	0	0	1
SOURCE # 39	41	23	69	0	0	0	1
SOURCE # 40	41	23	69	0	0	0	1
SOURCE # 41	40	23	70	0	0	0	1
SOURCE # 42	40	23	70	0	0	0	1
SOURCE # 43	40	23	70	0	0	0	1
SOURCE # 44	44	26	67	0	0	0	0
SOURCE # 45	44	26	67	0	0	0	0
SOURCE # 46	44	26	67	0	0	0	0
SOURCE # 47	45	26	66	0	0	0	0
SOURCE # 48	45	26	67	0	0	0	0
SOURCE # 49	45	26	67	0	0	0	0
SOURCE # 50	42	21	61	0	0	0	1
SOURCE # 51	42	21	61	0	0	0	1
BACKGROUND	0	54					
TOTAL wo bkg	67	52					
TOTAL w bkg	67	56					
TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3	

COORDINATE LOCATIONS (Ft)				X	Y	Z	DST
RECEIVER # 8	STS-SOR219			83995	43603	549	
SOURCE # 1	Primary Crusher			79767	41378	548	4777
SOURCE # 2	SAG Mill			80714	41311	556	4001
SOURCE # 3	Ball Mill			80812	41287	556	3935
SOURCE # 4	Regrind Mill 1			80996	41228	559	3825
SOURCE # 5	Regrind Mill 2			81013	41223	559	3815
SOURCE # 6	Regrind Mill 3			81031	41219	559	3803
SOURCE # 7	Regrind Mill 4			80991	41208	559	3841
SOURCE # 8	Regrind Mill 5			81008	41204	559	3831
SOURCE # 9	Regrind Mill 6			81026	41199	559	3820
SOURCE # 10	ROSAHT 1			71900	35000	680	14843
SOURCE # 11	ROSAHT 2			71850	34950	680	14912
SOURCE # 12	ROSAHT 3			71800	34900	680	14982
SOURCE # 13	ROSADZ 1			71750	34850	680	15052
SOURCE # 14	ROSADZ 2			71700	34800	680	15122
SOURCE # 15	ROSADZ 3			71650	34750	680	15191
SOURCE # 16	ROSA BUA			71910	35010	675	14829
SOURCE # 17	JPHT 1			78200	39000	680	7401
SOURCE # 18	JPHT 2			78150	38950	680	7472
SOURCE # 19	JPHT 3			78100	38900	680	7542
SOURCE # 20	JPDZ 1			78050	38850	680	7612
SOURCE # 21	JPDZ 2			78000	38800	680	7682
SOURCE # 22	JPDZ3			78210	39010	680	7387
SOURCE # 23	JPBU			78210	39010	680	7387
SOURCE # 24	HOSAHT 1			77400	43400	720	6600
SOURCE # 25	HOSAHT 2			77350	43350	720	6652
SOURCE # 26	HOSAHT 3			77300	43300	720	6704
SOURCE # 27	HOSADZ 1			77250	43250	720	6756
SOURCE # 28	HOSADZ 2			77200	43200	720	6809
SOURCE # 29	HOSADZ 3			77150	43150	720	6862
SOURCE # 30	HOSABU			77410	43410	720	6590
SOURCE # 31	JOSAHT 1			80600	43700	630	3397
SOURCE # 32	JOSAHT 2			80550	43650	630	3446
SOURCE # 33	JOSAHT 3			80500	43600	630	3495
SOURCE # 34	JOSADZ 1			80450	43550	630	3546
SOURCE # 35	JOSADZ 2			80400	43500	630	3597
SOURCE # 36	JOSADZ 3			80350	43450	630	3649

STS&PropResults-L-Peak Average.TXT

SOURCE # 37	JOSABU	80610	43710	630	3387
SOURCE # 38	CPDRILL 1	75500	33700	460	13047
SOURCE # 39	CPDRILL 2	75450	33650	460	13118
SOURCE # 40	CPDRILL 3	75400	33600	460	13188
SOURCE # 41	SPDRILL 1	74000	34800	480	13319
SOURCE # 42	SPDRILL 2	73950	34750	480	13389
SOURCE # 43	SPDRILL 3	73900	34700	480	13460
SOURCE # 44	SKPDRILL 1	75600	42100	420	8529
SOURCE # 45	SKPDRILL 2	75550	42050	420	8587
SOURCE # 46	SKPDRILL 3	75500	42000	420	8645
SOURCE # 47	LPDRILL 1	76900	39600	440	8147
SOURCE # 48	LPDRILL 2	76850	39550	440	8215
SOURCE # 49	LPDRILL 3	76800	39500	440	8283
SOURCE # 50	TSFHT	85300	37500	620	6241
SOURCE # 51	TSFDZ	85250	37450	620	6280

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	64	59	57	59	30	25	0	0	0
0									
A-wt	25	33	41	51	27	25	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 9 - STS-5099GMH -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	47	23	69	0	0	0	2
SOURCE # 2	48	24	68	0	0	0	2
SOURCE # 3	48	24	68	0	0	0	2
SOURCE # 4	41	19	59	0	0	0	0
SOURCE # 5	41	19	59	0	0	0	0
SOURCE # 6	41	19	59	0	0	0	0
SOURCE # 7	41	19	59	0	0	0	0
SOURCE # 8	41	19	59	0	0	0	0
SOURCE # 9	41	19	59	0	0	0	0
SOURCE # 10	32	19	63	0	0	0	3
SOURCE # 11	32	19	63	0	0	0	3
SOURCE # 12	32	19	63	0	0	0	3
SOURCE # 13	32	19	63	0	0	0	3
SOURCE # 14	32	19	63	0	0	0	3
SOURCE # 15	32	19	63	0	0	0	3
SOURCE # 16	45	30	75	0	0	0	5
SOURCE # 17	36	19	62	0	0	0	2
SOURCE # 18	36	19	62	0	0	0	2
SOURCE # 19	36	19	62	0	0	0	2
SOURCE # 20	36	19	62	0	0	0	2
SOURCE # 21	36	19	62	0	0	0	2
SOURCE # 22	36	20	63	0	0	0	2
SOURCE # 23	50	36	71	0	0	0	3
SOURCE # 24	35	19	63	0	0	0	2
SOURCE # 25	35	19	63	0	0	0	2
SOURCE # 26	35	19	63	0	0	0	2
SOURCE # 27	35	19	63	0	0	0	2
SOURCE # 28	35	19	63	0	0	0	2
SOURCE # 29	35	19	63	0	0	0	2
SOURCE # 30	48	34	72	0	0	0	4
SOURCE # 31	37	20	62	0	0	0	2
SOURCE # 32	37	20	62	0	0	0	2
SOURCE # 33	37	20	62	0	0	0	2

STS&PropResults-L-Peak Average.TXT							
SOURCE # 34	37	20	62	0	0	0	2
SOURCE # 35	37	20	62	0	0	0	2
SOURCE # 36	37	20	62	0	0	0	2
SOURCE # 37	51	37	70	0	0	0	3
SOURCE # 38	39	22	70	0	0	0	1
SOURCE # 39	39	22	70	0	0	0	1
SOURCE # 40	39	22	70	0	0	0	1
SOURCE # 41	38	22	71	0	0	0	1
SOURCE # 42	38	22	71	0	0	0	1
SOURCE # 43	38	22	71	0	0	0	1
SOURCE # 44	39	22	70	0	0	0	1
SOURCE # 45	39	22	70	0	0	0	1
SOURCE # 46	39	22	70	0	0	0	1
SOURCE # 47	40	23	70	0	0	0	1
SOURCE # 48	40	23	70	0	0	0	1
SOURCE # 49	40	23	70	0	0	0	1
SOURCE # 50	43	21	61	0	0	0	1
SOURCE # 51	43	21	61	0	0	0	1
BACKGROUND	0	74					
TOTAL wo bkg	59	43					
TOTAL w bkg	59	74					
TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3	

COORDINATE LOCATIONS (Ft)						
			X	Y	Z	DST
RECEIVER # 9	STS-5099GMH		90708	38956	576	
SOURCE # 1	Primary Crusher		79767	41378	548	11205
SOURCE # 2	SAG Mill		80714	41311	556	10267
SOURCE # 3	Ball Mill		80812	41287	556	10166
SOURCE # 4	Regrind Mill 1		80996	41228	559	9974
SOURCE # 5	Regrind Mill 2		81013	41223	559	9956
SOURCE # 6	Regrind Mill 3		81031	41219	559	9938
SOURCE # 7	Regrind Mill 4		80991	41208	559	9974
SOURCE # 8	Regrind Mill 5		81008	41204	559	9957
SOURCE # 9	Regrind Mill 6		81026	41199	559	9938
SOURCE # 10	ROSAHT 1		71900	35000	680	19219
SOURCE # 11	ROSAHT 2		71850	34950	680	19279
SOURCE # 12	ROSAHT 3		71800	34900	680	19338
SOURCE # 13	ROSADZ 1		71750	34850	680	19397
SOURCE # 14	ROSADZ 2		71700	34800	680	19457
SOURCE # 15	ROSADZ 3		71650	34750	680	19516
SOURCE # 16	ROSA BUA		71910	35010	675	19207
SOURCE # 17	JPHT 1		78200	39000	680	12508
SOURCE # 18	JPHT 2		78150	38950	680	12558
SOURCE # 19	JPHT 3		78100	38900	680	12608
SOURCE # 20	JPDZ 1		78050	38850	680	12658
SOURCE # 21	JPDZ 2		78000	38800	680	12709
SOURCE # 22	JPDZ3		78210	39010	680	12498
SOURCE # 23	JPBU		78210	39010	680	12498
SOURCE # 24	HOSAHT 1		77400	43400	720	14031
SOURCE # 25	HOSAHT 2		77350	43350	720	14062
SOURCE # 26	HOSAHT 3		77300	43300	720	14094
SOURCE # 27	HOSADZ 1		77250	43250	720	14127
SOURCE # 28	HOSADZ 2		77200	43200	720	14159
SOURCE # 29	HOSADZ 3		77150	43150	720	14192
SOURCE # 30	HOSABU		77410	43410	720	14024
SOURCE # 31	JOSAHT 1		80600	43700	630	11166
SOURCE # 32	JOSAHT 2		80550	43650	630	11190
SOURCE # 33	JOSAHT 3		80500	43600	630	11214

STS&PropResults-L-Peak Average.TXT

SOURCE # 34	JOSADZ 1	80450	43550	630	11239
SOURCE # 35	JOSADZ 2	80400	43500	630	11265
SOURCE # 36	JOSADZ 3	80350	43450	630	11291
SOURCE # 37	JOSABU	80610	43710	630	11161
SOURCE # 38	CPDRILL 1	75500	33700	460	16091
SOURCE # 39	CPDRILL 2	75450	33650	460	16154
SOURCE # 40	CPDRILL 3	75400	33600	460	16218
SOURCE # 41	SPDRILL 1	74000	34800	480	17217
SOURCE # 42	SPDRILL 2	73950	34750	480	17278
SOURCE # 43	SPDRILL 3	73900	34700	480	17338
SOURCE # 44	SKPDRILL 1	75600	42100	420	15432
SOURCE # 45	SKPDRILL 2	75550	42050	420	15471
SOURCE # 46	SKPDRILL 3	75500	42000	420	15510
SOURCE # 47	LPDRILL 1	76900	39600	440	13823
SOURCE # 48	LPDRILL 2	76850	39550	440	13871
SOURCE # 49	LPDRILL 3	76800	39500	440	13919
SOURCE # 50	TSFHT	85300	37500	620	5600
SOURCE # 51	TSFDZ	85250	37450	620	5662

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	56	52	50	49	18	6	0	0	0
0									
A-wt	17	26	33	41	15	6	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 10 - STS-SR29/204 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE					ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS		
SOURCE # 1	47	23	69	0	0	0	2	
SOURCE # 2	48	24	69	0	0	0	2	
SOURCE # 3	48	24	68	0	0	0	2	
SOURCE # 4	40	19	59	0	0	0	0	
SOURCE # 5	40	19	59	0	0	0	0	
SOURCE # 6	40	19	59	0	0	0	0	
SOURCE # 7	40	19	59	0	0	0	0	
SOURCE # 8	40	19	59	0	0	0	0	
SOURCE # 9	40	19	59	0	0	0	0	
SOURCE # 10	32	19	63	0	0	0	3	
SOURCE # 11	32	19	63	0	0	0	3	
SOURCE # 12	32	19	63	0	0	0	3	
SOURCE # 13	32	19	63	0	0	0	3	
SOURCE # 14	32	19	63	0	0	0	3	
SOURCE # 15	32	19	63	0	0	0	3	
SOURCE # 16	45	30	75	0	0	0	5	
SOURCE # 17	35	19	63	0	0	0	2	
SOURCE # 18	35	19	63	0	0	0	2	
SOURCE # 19	35	19	63	0	0	0	2	
SOURCE # 20	35	19	63	0	0	0	2	
SOURCE # 21	35	19	63	0	0	0	2	
SOURCE # 22	35	19	63	0	0	0	2	
SOURCE # 23	49	35	72	0	0	0	4	
SOURCE # 24	34	19	63	0	0	0	2	
SOURCE # 25	34	19	63	0	0	0	2	
SOURCE # 26	34	19	63	0	0	0	2	
SOURCE # 27	34	19	63	0	0	0	2	
SOURCE # 28	34	19	63	0	0	0	2	
SOURCE # 29	34	19	63	0	0	0	2	
SOURCE # 30	48	34	72	0	0	0	4	

STS&PropResults-L-Peak Average.TXT							
SOURCE # 31	36	20	62	0	0	0	2
SOURCE # 32	36	20	62	0	0	0	2
SOURCE # 33	36	20	62	0	0	0	2
SOURCE # 34	36	20	62	0	0	0	2
SOURCE # 35	36	20	62	0	0	0	2
SOURCE # 36	36	20	62	0	0	0	2
SOURCE # 37	50	37	71	0	0	0	3
SOURCE # 38	38	22	71	0	0	0	1
SOURCE # 39	38	22	71	0	0	0	1
SOURCE # 40	38	22	71	0	0	0	1
SOURCE # 41	38	21	71	0	0	0	1
SOURCE # 42	38	21	71	0	0	0	1
SOURCE # 43	37	21	71	0	0	0	1
SOURCE # 44	39	22	70	0	0	0	1
SOURCE # 45	39	22	70	0	0	0	1
SOURCE # 46	39	22	70	0	0	0	1
SOURCE # 47	40	22	70	0	0	0	1
SOURCE # 48	40	22	70	0	0	0	1
SOURCE # 49	39	22	70	0	0	0	1
SOURCE # 50	41	21	61	0	0	0	1
SOURCE # 51	41	21	61	0	0	0	1
BACKGROUND	0	79					
□							
TOTAL wo bkg	58	42					
TOTAL w bkg	58	79					
TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3							

COORDINATE LOCATIONS (Ft)					
		X	Y	Z	DST
RECEIVER # 10	STS-SR29/204	91534	39553	576	
SOURCE # 1	Primary Crusher	79767	41378	548	11907
SOURCE # 2	SAG Mill	80714	41311	556	10961
SOURCE # 3	Ball Mill	80812	41287	556	10860
SOURCE # 4	Regrind Mill 1	80996	41228	559	10670
SOURCE # 5	Regrind Mill 2	81013	41223	559	10652
SOURCE # 6	Regrind Mill 3	81031	41219	559	10634
SOURCE # 7	Regrind Mill 4	80991	41208	559	10672
SOURCE # 8	Regrind Mill 5	81008	41204	559	10654
SOURCE # 9	Regrind Mill 6	81026	41199	559	10636
SOURCE # 10	ROSAHT 1	71900	35000	680	20155
SOURCE # 11	ROSAHT 2	71850	34950	680	20215
SOURCE # 12	ROSAHT 3	71800	34900	680	20275
SOURCE # 13	ROSADZ 1	71750	34850	680	20335
SOURCE # 14	ROSADZ 2	71700	34800	680	20395
SOURCE # 15	ROSADZ 3	71650	34750	680	20456
SOURCE # 16	ROSA BUA	71910	35010	675	20143
SOURCE # 17	JPHT 1	78200	39000	680	13345
SOURCE # 18	JPHT 2	78150	38950	680	13397
SOURCE # 19	JPHT 3	78100	38900	680	13450
SOURCE # 20	JPDZ 1	78050	38850	680	13502
SOURCE # 21	JPDZ 2	78000	38800	680	13555
SOURCE # 22	JPDZ3	78210	39010	680	13335
SOURCE # 23	JPBU	78210	39010	680	13335
SOURCE # 24	HOSAHT 1	77400	43400	720	14648
SOURCE # 25	HOSAHT 2	77350	43350	720	14684
SOURCE # 26	HOSAHT 3	77300	43300	720	14719
SOURCE # 27	HOSADZ 1	77250	43250	720	14755
SOURCE # 28	HOSADZ 2	77200	43200	720	14791
SOURCE # 29	HOSADZ 3	77150	43150	720	14827
SOURCE # 30	HOSABU	77410	43410	720	14641

APPENDIX F

Soundcalc Output –L-Peak Results for STS Ambient Locations

STS&PropResults-L-Peak.TXT
 GEOSONICS SOUND-CALC SOUND PROJECTIONS
 AT RECEIVER # 1 - STS-HBC -

PROJECT - HGMWC-L Peak

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1	52	27	66	0	0	0	1
SOURCE #	2	51	26	66	0	0	0	1
SOURCE #	3	51	26	66	0	0	0	1
SOURCE #	4	43	20	59	0	0	0	0
SOURCE #	5	43	20	59	0	0	0	0
SOURCE #	6	43	20	59	0	0	0	0
SOURCE #	7	43	20	59	0	0	0	0
SOURCE #	8	43	20	59	0	0	0	0
SOURCE #	9	43	20	59	0	0	0	0
SOURCE #	10	35	19	63	0	0	0	2
SOURCE #	11	35	19	63	0	0	0	2
SOURCE #	12	35	19	63	0	0	0	2
SOURCE #	13	35	19	63	0	0	0	2
SOURCE #	14	35	19	63	0	0	0	2
SOURCE #	15	35	19	63	0	0	0	2
SOURCE #	16	49	35	72	0	0	0	4
SOURCE #	17	39	20	62	0	0	0	1
SOURCE #	18	39	20	62	0	0	0	1
SOURCE #	19	39	20	62	0	0	0	1
SOURCE #	20	39	20	62	0	0	0	1
SOURCE #	21	38	20	62	0	0	0	1
SOURCE #	22	39	20	62	0	0	0	1
SOURCE #	23	53	40	68	0	0	0	2
SOURCE #	24	45	22	60	0	0	0	1
SOURCE #	25	45	22	60	0	0	0	1
SOURCE #	26	45	22	60	0	0	0	1
SOURCE #	27	45	22	60	0	0	0	1
SOURCE #	28	44	22	60	0	0	0	1
SOURCE #	29	44	22	60	0	0	0	1
SOURCE #	30	59	47	62	0	0	0	1
SOURCE #	31	43	21	61	0	0	0	1
SOURCE #	32	43	21	61	0	0	0	1
SOURCE #	33	43	21	61	0	0	0	1
SOURCE #	34	43	21	61	0	0	0	1
SOURCE #	35	43	21	61	0	0	0	1
SOURCE #	36	43	21	61	0	0	0	1
SOURCE #	37	57	45	64	0	0	0	1
SOURCE #	38	40	23	70	0	0	0	1
SOURCE #	39	40	22	70	0	0	0	1
SOURCE #	40	40	22	70	0	0	0	1
SOURCE #	41	40	23	70	0	0	0	1
SOURCE #	42	40	23	70	0	0	0	1
SOURCE #	43	40	23	70	0	0	0	1
SOURCE #	44	48	28	64	0	0	0	0
SOURCE #	45	48	28	64	0	0	0	0
SOURCE #	46	48	28	64	0	0	0	0
SOURCE #	47	45	26	67	0	0	0	0
SOURCE #	48	45	26	67	0	0	0	0
SOURCE #	49	45	26	67	0	0	0	0
SOURCE #	50	35	19	63	0	0	0	2
SOURCE #	51	35	19	63	0	0	0	2
BACKGROUND		0	86					

□

TOTAL wo bkg 65 50
 TOTAL w bkg 65 86

TEMPERATURE 15 C 58 F STS&PropResults-L-Peak.TXT
 RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	1 STS-HBC	76898	47837	527	
SOURCE #	1 Primary Crusher	79767	41378	548	7067
SOURCE #	2 SAG Mill	80714	41311	556	7559
SOURCE #	3 Ball Mill	80812	41287	556	7630
SOURCE #	4 Regrind Mill 1	80996	41228	559	7776
SOURCE #	5 Regrind Mill 2	81013	41223	559	7789
SOURCE #	6 Regrind Mill 3	81031	41219	559	7802
SOURCE #	7 Regrind Mill 4	80991	41208	559	7790
SOURCE #	8 Regrind Mill 5	81008	41204	559	7803
SOURCE #	9 Regrind Mill 6	81026	41199	559	7816
SOURCE #	10 ROSAHT 1	71900	35000	680	13776
SOURCE #	11 ROSAHT 2	71850	34950	680	13841
SOURCE #	12 ROSAHT 3	71800	34900	680	13906
SOURCE #	13 ROSADZ 1	71750	34850	680	13970
SOURCE #	14 ROSADZ 2	71700	34800	680	14035
SOURCE #	15 ROSADZ 3	71650	34750	680	14100
SOURCE #	16 ROSA BUA	71910	35010	675	13763
SOURCE #	17 JPHT 1	78200	39000	680	8933
SOURCE #	18 JPHT 2	78150	38950	680	8976
SOURCE #	19 JPHT 3	78100	38900	680	9018
SOURCE #	20 JPDZ 1	78050	38850	680	9061
SOURCE #	21 JPDZ 2	78000	38800	680	9105
SOURCE #	22 JPDZ3	78210	39010	680	8925
SOURCE #	23 JPBU	78210	39010	680	8925
SOURCE #	24 HOSAHT 1	77400	43400	720	4469
SOURCE #	25 HOSAHT 2	77350	43350	720	4513
SOURCE #	26 HOSAHT 3	77300	43300	720	4558
SOURCE #	27 HOSADZ 1	77250	43250	720	4604
SOURCE #	28 HOSADZ 2	77200	43200	720	4650
SOURCE #	29 HOSADZ 3	77150	43150	720	4697
SOURCE #	30 HOSABU	77410	43410	720	4460
SOURCE #	31 JOSAHHT 1	80600	43700	630	5552
SOURCE #	32 JOSAHHT 2	80550	43650	630	5556
SOURCE #	33 JOSAHHT 3	80500	43600	630	5562
SOURCE #	34 JOSADZ 1	80450	43550	630	5568
SOURCE #	35 JOSADZ 2	80400	43500	630	5575
SOURCE #	36 JOSADZ 3	80350	43450	630	5583
SOURCE #	37 JOSABU	80610	43710	630	5551
SOURCE #	38 CPDRILL 1	75500	33700	460	14206
SOURCE #	39 CPDRILL 2	75450	33650	460	14260
SOURCE #	40 CPDRILL 3	75400	33600	460	14315
SOURCE #	41 SPDRILL 1	74000	34800	480	13355
SOURCE #	42 SPDRILL 2	73950	34750	480	13415
SOURCE #	43 SPDRILL 3	73900	34700	480	13474
SOURCE #	44 SKPDRILL 1	75600	42100	420	5883
SOURCE #	45 SKPDRILL 2	75550	42050	420	5942
SOURCE #	46 SKPDRILL 3	75500	42000	420	6003
SOURCE #	47 LPDRILL 1	76900	39600	440	8237
SOURCE #	48 LPDRILL 2	76850	39550	440	8287
SOURCE #	49 LPDRILL 3	76800	39500	440	8338
SOURCE #	50 TSFHT	85300	37500	620	13321
SOURCE #	51 TSFDZ	85250	37450	620	13328

PROJECTED OCTAVE LEVELS:
 OCTAVE 31.5 63 125 250 500 1000 2K 4K 8000
 16K
 LINEAR 61 57 56 58 28 22 0 0 0
 0

STS&PropResults-L-Peak.TXT
A-wt 22 31 40 49 24 22 1 1 -2
-7
□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 2 - STS-KIP -

PROJECT - HGMWC

CONTRIBUTOR	SPL DB(Lin)	DBA	DBA ATTENUATION FROM REF. DISTANCE SPHERE PATH /1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	54	29	63	0	1
SOURCE # 2	54	29	63	0	1
SOURCE # 3	54	29	63	0	1
SOURCE # 4	46	20	58	0	0
SOURCE # 5	46	20	58	0	0
SOURCE # 6	46	20	58	0	0
SOURCE # 7	46	20	58	0	0
SOURCE # 8	46	20	58	0	0
SOURCE # 9	46	20	58	0	0
SOURCE # 10	40	20	62	0	1
SOURCE # 11	40	20	62	0	1
SOURCE # 12	40	20	62	0	1
SOURCE # 13	40	20	62	0	1
SOURCE # 14	40	20	62	0	1
SOURCE # 15	40	20	62	0	1
SOURCE # 16	54	41	67	0	2
SOURCE # 17	48	24	58	0	0
SOURCE # 18	48	24	58	0	0
SOURCE # 19	48	24	58	0	0
SOURCE # 20	48	24	58	0	0
SOURCE # 21	48	24	57	0	0
SOURCE # 22	48	24	58	0	0
SOURCE # 23	63	50	59	0	0
SOURCE # 24	40	20	62	0	1
SOURCE # 25	40	20	62	0	1
SOURCE # 26	40	20	62	0	1
SOURCE # 27	40	20	62	0	1
SOURCE # 28	40	20	62	0	1
SOURCE # 29	40	20	62	0	1
SOURCE # 30	54	42	67	0	2
SOURCE # 31	40	20	62	0	1
SOURCE # 32	40	20	62	0	1
SOURCE # 33	40	20	62	0	1
SOURCE # 34	40	20	62	0	1
SOURCE # 35	40	20	62	0	1
SOURCE # 36	40	20	62	0	1
SOURCE # 37	54	41	67	0	2
SOURCE # 38	50	30	62	0	0
SOURCE # 39	50	30	62	0	0
SOURCE # 40	50	30	62	0	0
SOURCE # 41	48	29	64	0	0
SOURCE # 42	48	29	64	0	0
SOURCE # 43	48	29	64	0	0
SOURCE # 44	46	27	65	0	0
SOURCE # 45	46	27	65	0	0
SOURCE # 46	46	27	65	0	0
SOURCE # 47	51	31	62	0	0
SOURCE # 48	51	31	62	0	0
SOURCE # 49	51	31	62	0	0
SOURCE # 50	42	21	61	0	1
SOURCE # 51	42	21	61	0	1
BACKGROUND	77	89			

□

STS&PropResults-L-Peak.TXT
TOTAL wo bkg 67 52
TOTAL w bkg 77 89

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	2 STS-KIP	79441	36121	570	
SOURCE #	1 Primary Crusher	79767	41378	548	5267
SOURCE #	2 SAG Mill	80714	41311	556	5344
SOURCE #	3 Ball Mill	80812	41287	556	5345
SOURCE #	4 Regrind Mill 1	80996	41228	559	5338
SOURCE #	5 Regrind Mill 2	81013	41223	559	5338
SOURCE #	6 Regrind Mill 3	81031	41219	559	5340
SOURCE #	7 Regrind Mill 4	80991	41208	559	5317
SOURCE #	8 Regrind Mill 5	81008	41204	559	5319
SOURCE #	9 Regrind Mill 6	81026	41199	559	5319
SOURCE #	10 ROSAHT 1	71900	35000	680	7624
SOURCE #	11 ROSAHT 2	71850	34950	680	7681
SOURCE #	12 ROSAHT 3	71800	34900	680	7738
SOURCE #	13 ROSADZ 1	71750	34850	680	7796
SOURCE #	14 ROSADZ 2	71700	34800	680	7853
SOURCE #	15 ROSADZ 3	71650	34750	680	7911
SOURCE #	16 ROSA BUA	71910	35010	675	7613
SOURCE #	17 JPHT 1	78200	39000	680	3137
SOURCE #	18 JPHT 2	78150	38950	680	3111
SOURCE #	19 JPHT 3	78100	38900	680	3087
SOURCE #	20 JPDZ 1	78050	38850	680	3065
SOURCE #	21 JPDZ 2	78000	38800	680	3043
SOURCE #	22 JPDZ3	78210	39010	680	3142
SOURCE #	23 JPBU	78210	39010	680	3142
SOURCE #	24 HOSAHT 1	77400	43400	720	7561
SOURCE #	25 HOSAHT 2	77350	43350	720	7526
SOURCE #	26 HOSAHT 3	77300	43300	720	7492
SOURCE #	27 HOSADZ 1	77250	43250	720	7459
SOURCE #	28 HOSADZ 2	77200	43200	720	7426
SOURCE #	29 HOSADZ 3	77150	43150	720	7394
SOURCE #	30 HOSABU	77410	43410	720	7568
SOURCE #	31 JOSAH 1	80600	43700	630	7667
SOURCE #	32 JOSAH 2	80550	43650	630	7610
SOURCE #	33 JOSAH 3	80500	43600	630	7553
SOURCE #	34 JOSADZ 1	80450	43550	630	7497
SOURCE #	35 JOSADZ 2	80400	43500	630	7441
SOURCE #	36 JOSADZ 3	80350	43450	630	7385
SOURCE #	37 JOSABU	80610	43710	630	7678
SOURCE #	38 CPDRILL 1	75500	33700	460	4626
SOURCE #	39 CPDRILL 2	75450	33650	460	4695
SOURCE #	40 CPDRILL 3	75400	33600	460	4764
SOURCE #	41 SPDRILL 1	74000	34800	480	5599
SOURCE #	42 SPDRILL 2	73950	34750	480	5660
SOURCE #	43 SPDRILL 3	73900	34700	480	5721
SOURCE #	44 SKPDRILL 1	75600	42100	420	7108
SOURCE #	45 SKPDRILL 2	75550	42050	420	7093
SOURCE #	46 SKPDRILL 3	75500	42000	420	7079
SOURCE #	47 LPDRILL 1	76900	39600	440	4310
SOURCE #	48 LPDRILL 2	76850	39550	440	4299
SOURCE #	49 LPDRILL 3	76800	39500	440	4290
SOURCE #	50 TSFHT	85300	37500	620	6019
SOURCE #	51 TSFDZ	85250	37450	620	5959

PROJECTED OCTAVE LEVELS:

OCTAVE 31.5 63 125 250 500 1000 2K 4K 8000

STS&PropResults-L-Peak.TXT

16K
 LINEAR 64 60 59 60 31 26 0 0 0
 0
 A-wt 24 34 43 52 28 26 1 1 -2
 -7
 □

GEOSONICS SOUND-CALC SOUND PROJECTIONS
 AT RECEIVER # 3 - STS-Loc1 -

PROJECT - HGMWC

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1	49	24	68	0	0	0	2
SOURCE #	2	48	24	68	0	0	0	2
SOURCE #	3	48	24	68	0	0	0	2
SOURCE #	4	40	19	59	0	0	0	0
SOURCE #	5	40	19	59	0	0	0	0
SOURCE #	6	40	19	59	0	0	0	0
SOURCE #	7	40	19	59	0	0	0	0
SOURCE #	8	40	19	59	0	0	0	0
SOURCE #	9	40	19	59	0	0	0	0
SOURCE #	10	52	27	54	0	0	0	0
SOURCE #	11	52	27	54	0	0	0	0
SOURCE #	12	52	27	55	0	0	0	0
SOURCE #	13	52	27	55	0	0	0	0
SOURCE #	14	52	27	55	0	0	0	0
SOURCE #	15	51	27	55	0	0	0	0
SOURCE #	16	67	55	55	0	0	0	0
SOURCE #	17	41	20	61	0	0	0	1
SOURCE #	18	41	20	61	0	0	0	1
SOURCE #	19	41	20	61	0	0	0	1
SOURCE #	20	41	21	61	0	0	0	1
SOURCE #	21	41	21	61	0	0	0	1
SOURCE #	22	41	20	61	0	0	0	1
SOURCE #	23	55	42	66	0	0	0	2
SOURCE #	24	37	20	62	0	0	0	2
SOURCE #	25	38	20	62	0	0	0	2
SOURCE #	26	38	20	62	0	0	0	2
SOURCE #	27	38	20	62	0	0	0	2
SOURCE #	28	38	20	62	0	0	0	2
SOURCE #	29	38	20	62	0	0	0	2
SOURCE #	30	51	38	69	0	0	0	3
SOURCE #	31	36	20	63	0	0	0	2
SOURCE #	32	36	20	63	0	0	0	2
SOURCE #	33	36	20	62	0	0	0	2
SOURCE #	34	36	20	62	0	0	0	2
SOURCE #	35	36	20	62	0	0	0	2
SOURCE #	36	36	20	62	0	0	0	2
SOURCE #	37	50	36	71	0	0	0	3
SOURCE #	38	57	38	55	0	0	0	0
SOURCE #	39	57	38	55	0	0	0	0
SOURCE #	40	58	38	55	0	0	0	0
SOURCE #	41	63	43	50	0	0	0	0
SOURCE #	42	63	44	50	0	0	0	0
SOURCE #	43	64	44	49	0	0	0	0
SOURCE #	44	44	26	67	0	0	0	0
SOURCE #	45	45	26	67	0	0	0	0
SOURCE #	46	45	26	67	0	0	0	0
SOURCE #	47	47	27	65	0	0	0	0
SOURCE #	48	47	28	65	0	0	0	0
SOURCE #	49	47	28	65	0	0	0	0
SOURCE #	50	36	20	63	0	0	0	2
SOURCE #	51	36	20	63	0	0	0	2

ST&PropResults-L-Peak.TXT

BACKGROUND 0 69

TOTAL wo bkg 72 56

TOTAL w bkg 72 70

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 3	STS-Loc1	73466	33832	475	
SOURCE # 1	Primary Crusher	79767	41378	548	9831
SOURCE # 2	SAG Mill	80714	41311	556	10416
SOURCE # 3	Ball Mill	80812	41287	556	10467
SOURCE # 4	Regrind Mill 1	80996	41228	559	10555
SOURCE # 5	Regrind Mill 2	81013	41223	559	10563
SOURCE # 6	Regrind Mill 3	81031	41219	559	10573
SOURCE # 7	Regrind Mill 4	80991	41208	559	10537
SOURCE # 8	Regrind Mill 5	81008	41204	559	10546
SOURCE # 9	Regrind Mill 6	81026	41199	559	10556
SOURCE # 10	ROSAHT 1	71900	35000	680	1964
SOURCE # 11	ROSAHT 2	71850	34950	680	1975
SOURCE # 12	ROSAHT 3	71800	34900	680	1989
SOURCE # 13	ROSADZ 1	71750	34850	680	2005
SOURCE # 14	ROSADZ 2	71700	34800	680	2024
SOURCE # 15	ROSADZ 3	71650	34750	680	2045
SOURCE # 16	ROSA BUA	71910	35010	675	1961
SOURCE # 17	JPHT 1	78200	39000	680	7011
SOURCE # 18	JPHT 2	78150	38950	680	6940
SOURCE # 19	JPHT 3	78100	38900	680	6870
SOURCE # 20	JPDZ 1	78050	38850	680	6799
SOURCE # 21	JPDZ 2	78000	38800	680	6729
SOURCE # 22	JPDZ3	78210	39010	680	7025
SOURCE # 23	JPBU	78210	39010	680	7025
SOURCE # 24	HOSAHT 1	77400	43400	720	10348
SOURCE # 25	HOSAHT 2	77350	43350	720	10282
SOURCE # 26	HOSAHT 3	77300	43300	720	10217
SOURCE # 27	HOSADZ 1	77250	43250	720	10152
SOURCE # 28	HOSADZ 2	77200	43200	720	10087
SOURCE # 29	HOSADZ 3	77150	43150	720	10022
SOURCE # 30	HOSABU	77410	43410	720	10361
SOURCE # 31	JOSAHT 1	80600	43700	630	12177
SOURCE # 32	JOSAHT 2	80550	43650	630	12107
SOURCE # 33	JOSAHT 3	80500	43600	630	12038
SOURCE # 34	JOSADZ 1	80450	43550	630	11968
SOURCE # 35	JOSADZ 2	80400	43500	630	11898
SOURCE # 36	JOSADZ 3	80350	43450	630	11828
SOURCE # 37	JOSABU	80610	43710	630	12191
SOURCE # 38	CPDRILL 1	75500	33700	460	2038
SOURCE # 39	CPDRILL 2	75450	33650	460	1992
SOURCE # 40	CPDRILL 3	75400	33600	460	1947
SOURCE # 41	SPDRILL 1	74000	34800	480	1105
SOURCE # 42	SPDRILL 2	73950	34750	480	1037
SOURCE # 43	SPDRILL 3	73900	34700	480	970
SOURCE # 44	SKPDRILL 1	75600	42100	420	8539
SOURCE # 45	SKPDRILL 2	75550	42050	420	8478
SOURCE # 46	SKPDRILL 3	75500	42000	420	8417
SOURCE # 47	LPDRILL 1	76900	39600	440	6712
SOURCE # 48	LPDRILL 2	76850	39550	440	6644
SOURCE # 49	LPDRILL 3	76800	39500	440	6575
SOURCE # 50	TSFHT	85300	37500	620	12390
SOURCE # 51	TSFDZ	85250	37450	620	12327

STS&PropResults-L-Peak.TXT

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	66	67	66	64	36	32	11	0	0
0									
A-wt	26	41	50	55	33	32	12	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 4 - STS-Loc3 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE					ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000	Ft	BARRIERS	
SOURCE # 1	52	27	65	0	0		0	1
SOURCE # 2	51	26	66	0	0		0	1
SOURCE # 3	51	26	66	0	0		0	1
SOURCE # 4	43	20	59	0	0		0	0
SOURCE # 5	43	20	59	0	0		0	0
SOURCE # 6	43	20	59	0	0		0	0
SOURCE # 7	43	20	59	0	0		0	0
SOURCE # 8	43	20	59	0	0		0	0
SOURCE # 9	43	20	59	0	0		0	0
SOURCE # 10	45	22	60	0	0		0	1
SOURCE # 11	45	22	60	0	0		0	1
SOURCE # 12	45	22	60	0	0		0	1
SOURCE # 13	44	22	60	0	0		0	1
SOURCE # 14	44	22	60	0	0		0	1
SOURCE # 15	44	22	60	0	0		0	1
SOURCE # 16	60	47	62	0	0		0	1
SOURCE # 17	44	22	60	0	0		0	1
SOURCE # 18	44	22	60	0	0		0	1
SOURCE # 19	44	22	60	0	0		0	1
SOURCE # 20	44	22	60	0	0		0	1
SOURCE # 21	44	22	60	0	0		0	1
SOURCE # 22	44	22	60	0	0		0	1
SOURCE # 23	59	46	63	0	0		0	1
SOURCE # 24	42	21	61	0	0		0	1
SOURCE # 25	43	21	61	0	0		0	1
SOURCE # 26	43	21	61	0	0		0	1
SOURCE # 27	43	21	61	0	0		0	1
SOURCE # 28	43	21	61	0	0		0	1
SOURCE # 29	43	21	61	0	0		0	1
SOURCE # 30	57	44	65	0	0		0	1
SOURCE # 31	39	20	62	0	0		0	1
SOURCE # 32	39	20	62	0	0		0	1
SOURCE # 33	39	20	62	0	0		0	1
SOURCE # 34	39	20	62	0	0		0	1
SOURCE # 35	39	20	62	0	0		0	1
SOURCE # 36	39	20	62	0	0		0	1
SOURCE # 37	53	40	68	0	0		0	2
SOURCE # 38	48	29	64	0	0		0	0
SOURCE # 39	48	29	64	0	0		0	0
SOURCE # 40	48	28	64	0	0		0	0
SOURCE # 41	50	31	62	0	0		0	0
SOURCE # 42	50	31	62	0	0		0	0
SOURCE # 43	50	31	62	0	0		0	0
SOURCE # 44	52	32	60	0	0		0	0
SOURCE # 45	52	33	60	0	0		0	0
SOURCE # 46	52	33	60	0	0		0	0
SOURCE # 47	52	33	60	0	0		0	0
SOURCE # 48	52	33	60	0	0		0	0

STS&PropResults-L-Peak.TXT							
SOURCE # 49	53	33	60	0	0	0	0
SOURCE # 50	36	20	62	0	0	0	2
SOURCE # 51	36	20	62	0	0	0	2
BACKGROUND	0	63					

□

TOTAL wo bkg	67	52
TOTAL w bkg	67	63

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

RECEIVER #		X	Y	Z	DST
4	STS-Loc3	73386	39149	525	
1	Primary Crusher	79767	41378	548	6759
2	SAG Mill	80714	41311	556	7641
3	Ball Mill	80812	41287	556	7728
4	Regrind Mill 1	80996	41228	559	7888
5	Regrind Mill 2	81013	41223	559	7904
6	Regrind Mill 3	81031	41219	559	7920
7	Regrind Mill 4	80991	41208	559	7878
8	Regrind Mill 5	81008	41204	559	7894
9	Regrind Mill 6	81026	41199	559	7910
10	ROSAHT 1	71900	35000	680	4409
11	ROSAHT 2	71850	34950	680	4473
12	ROSAHT 3	71800	34900	680	4538
13	ROSADZ 1	71750	34850	680	4602
14	ROSADZ 2	71700	34800	680	4666
15	ROSADZ 3	71650	34750	680	4731
16	ROSA BUA	71910	35010	675	4396
17	JPHT 1	78200	39000	680	4818
18	JPHT 2	78150	38950	680	4770
19	JPHT 3	78100	38900	680	4723
20	JPDZ 1	78050	38850	680	4676
21	JPDZ 2	78000	38800	680	4629
22	JPDZ3	78210	39010	680	4828
23	JPBU	78210	39010	680	4828
24	HOSAHT 1	77400	43400	720	5849
25	HOSAHT 2	77350	43350	720	5779
26	HOSAHT 3	77300	43300	720	5708
27	HOSADZ 1	77250	43250	720	5637
28	HOSADZ 2	77200	43200	720	5567
29	HOSADZ 3	77150	43150	720	5496
30	HOSABU	77410	43410	720	5864
31	JOSAHT 1	80600	43700	630	8530
32	JOSAHT 2	80550	43650	630	8461
33	JOSAHT 3	80500	43600	630	8392
34	JOSADZ 1	80450	43550	630	8323
35	JOSADZ 2	80400	43500	630	8254
36	JOSADZ 3	80350	43450	630	8185
37	JOSABU	80610	43710	630	8544
38	CPDRILL 1	75500	33700	460	5845
39	CPDRILL 2	75450	33650	460	5873
40	CPDRILL 3	75400	33600	460	5903
41	SPDRILL 1	74000	34800	480	4392
42	SPDRILL 2	73950	34750	480	4435
43	SPDRILL 3	73900	34700	480	4478
44	SKPDRILL 1	75600	42100	420	3690
45	SKPDRILL 2	75550	42050	420	3620
46	SKPDRILL 3	75500	42000	420	3550
47	LPDRILL 1	76900	39600	440	3543
48	LPDRILL 2	76850	39550	440	3488

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SOURCE # 49	LPDRILL 3	76800	39500	440	3433
SOURCE # 50	TSFHT	85300	37500	620	12027
SOURCE # 51	TSFDZ	85250	37450	620	11985

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	63	61	60	59	30	24	0	0	0
0									
A-wt	23	35	44	51	27	24	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 5 - STS-House50/GMH -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	56	31	62	0	0	0	1
SOURCE # 2	57	32	61	0	0	0	0
SOURCE # 3	57	32	60	0	0	0	0
SOURCE # 4	50	22	57	0	0	0	0
SOURCE # 5	50	22	57	0	0	0	0
SOURCE # 6	50	22	57	0	0	0	0
SOURCE # 7	50	21	57	0	0	0	0
SOURCE # 8	50	21	57	0	0	0	0
SOURCE # 9	50	22	57	0	0	0	0
SOURCE # 10	37	20	62	0	0	0	2
SOURCE # 11	37	20	62	0	0	0	2
SOURCE # 12	36	20	62	0	0	0	2
SOURCE # 13	36	20	62	0	0	0	2
SOURCE # 14	36	20	62	0	0	0	2
SOURCE # 15	36	20	62	0	0	0	2
SOURCE # 16	51	37	70	0	0	0	3
SOURCE # 17	44	22	60	0	0	0	1
SOURCE # 18	44	22	60	0	0	0	1
SOURCE # 19	44	22	60	0	0	0	1
SOURCE # 20	44	22	60	0	0	0	1
SOURCE # 21	44	22	60	0	0	0	1
SOURCE # 22	44	22	60	0	0	0	1
SOURCE # 23	59	47	63	0	0	0	1
SOURCE # 24	40	20	62	0	0	0	1
SOURCE # 25	40	20	62	0	0	0	1
SOURCE # 26	40	20	62	0	0	0	1
SOURCE # 27	40	20	62	0	0	0	1
SOURCE # 28	40	20	62	0	0	0	1
SOURCE # 29	40	20	62	0	0	0	1
SOURCE # 30	55	42	67	0	0	0	2
SOURCE # 31	42	21	61	0	0	0	1
SOURCE # 32	42	21	61	0	0	0	1
SOURCE # 33	42	21	61	0	0	0	1
SOURCE # 34	42	21	61	0	0	0	1
SOURCE # 35	42	21	61	0	0	0	1
SOURCE # 36	42	21	61	0	0	0	1
SOURCE # 37	57	44	65	0	0	0	1
SOURCE # 38	45	26	67	0	0	0	0
SOURCE # 39	44	26	67	0	0	0	0
SOURCE # 40	44	26	67	0	0	0	0
SOURCE # 41	44	25	67	0	0	0	1
SOURCE # 42	44	25	67	0	0	0	1
SOURCE # 43	44	25	68	0	0	0	1
SOURCE # 44	45	26	67	0	0	0	0
SOURCE # 45	45	26	67	0	0	0	0

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SOURCE # 46	45	26	67	0	0	0	0
SOURCE # 47	48	28	64	0	0	0	0
SOURCE # 48	48	28	64	0	0	0	0
SOURCE # 49	47	28	64	0	0	0	0
SOURCE # 50	49	25	57	0	0	0	0
SOURCE # 51	50	25	56	0	0	0	0
BACKGROUND	0	63					

TOTAL wo bkg 67 50
TOTAL w bkg 67 63

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 5	STS-HouseSO/GMH	82759	38125	560	
SOURCE # 1	Primary Crusher	79767	41378	548	4419
SOURCE # 2	SAG Mill	80714	41311	556	3786
SOURCE # 3	Ball Mill	80812	41287	556	3713
SOURCE # 4	Regrind Mill 1	80996	41228	559	3568
SOURCE # 5	Regrind Mill 2	81013	41223	559	3556
SOURCE # 6	Regrind Mill 3	81031	41219	559	3543
SOURCE # 7	Regrind Mill 4	80991	41208	559	3553
SOURCE # 8	Regrind Mill 5	81008	41204	559	3542
SOURCE # 9	Regrind Mill 6	81026	41199	559	3528
SOURCE # 10	ROSAHT 1	71900	35000	680	11300
SOURCE # 11	ROSAHT 2	71850	34950	680	11362
SOURCE # 12	ROSAHT 3	71800	34900	680	11424
SOURCE # 13	ROSADZ 1	71750	34850	680	11486
SOURCE # 14	ROSADZ 2	71700	34800	680	11548
SOURCE # 15	ROSADZ 3	71650	34750	680	11610
SOURCE # 16	ROSA BUA	71910	35010	675	11287
SOURCE # 17	JPHT 1	78200	39000	680	4643
SOURCE # 18	JPHT 2	78150	38950	680	4683
SOURCE # 19	JPHT 3	78100	38900	680	4724
SOURCE # 20	JPDZ 1	78050	38850	680	4765
SOURCE # 21	JPDZ 2	78000	38800	680	4808
SOURCE # 22	JPDZ3	78210	39010	680	4635
SOURCE # 23	JPBU	78210	39010	680	4635
SOURCE # 24	HOSAHT 1	77400	43400	720	7521
SOURCE # 25	HOSAHT 2	77350	43350	720	7522
SOURCE # 26	HOSAHT 3	77300	43300	720	7523
SOURCE # 27	HOSADZ 1	77250	43250	720	7525
SOURCE # 28	HOSADZ 2	77200	43200	720	7528
SOURCE # 29	HOSADZ 3	77150	43150	720	7532
SOURCE # 30	HOSABU	77410	43410	720	7521
SOURCE # 31	JOSAHT 1	80600	43700	630	5978
SOURCE # 32	JOSAHT 2	80550	43650	630	5950
SOURCE # 33	JOSAHT 3	80500	43600	630	5923
SOURCE # 34	JOSADZ 1	80450	43550	630	5896
SOURCE # 35	JOSADZ 2	80400	43500	630	5870
SOURCE # 36	JOSADZ 3	80350	43450	630	5844
SOURCE # 37	JOSABU	80610	43710	630	5984
SOURCE # 38	CPDRILL 1	75500	33700	460	8501
SOURCE # 39	CPDRILL 2	75450	33650	460	8570
SOURCE # 40	CPDRILL 3	75400	33600	460	8639
SOURCE # 41	SPDRILL 1	74000	34800	480	9369
SOURCE # 42	SPDRILL 2	73950	34750	480	9433
SOURCE # 43	SPDRILL 3	73900	34700	480	9498
SOURCE # 44	SKPDRILL 1	75600	42100	420	8189
SOURCE # 45	SKPDRILL 2	75550	42050	420	8209

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SOURCE # 46	SKPDRILL 3	75500	42000	420	8229
SOURCE # 47	LPDRILL 1	76900	39600	440	6043
SOURCE # 48	LPDRILL 2	76850	39550	440	6079
SOURCE # 49	LPDRILL 3	76800	39500	440	6116
SOURCE # 50	TSFHT	85300	37500	620	2617
SOURCE # 51	TSFDZ	85250	37450	620	2581

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	64	60	57	58	30	22	0	0	0
0									
A-wt	25	33	41	49	26	22	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 6 - STS-HouseGMH -

PROJECT - HGMWC

CONTRIBUTOR	SPL DB(Lin)	DBA	DBA SPHERE	ATTENUATION PATH	FROM REF. /1000 Ft	DISTANCE BARRIERS	ATMOS.
SOURCE # 1	59	35	58	0	0	0	0
SOURCE # 2	62	37	56	0	0	0	0
SOURCE # 3	62	37	56	0	0	0	0
SOURCE # 4	55	24	54	0	0	0	0
SOURCE # 5	55	24	54	0	0	0	0
SOURCE # 6	55	24	54	0	0	0	0
SOURCE # 7	55	24	54	0	0	0	0
SOURCE # 8	55	24	54	0	0	0	0
SOURCE # 9	55	24	54	0	0	0	0
SOURCE # 10	37	20	62	0	0	0	2
SOURCE # 11	37	20	62	0	0	0	2
SOURCE # 12	37	20	62	0	0	0	2
SOURCE # 13	37	20	62	0	0	0	2
SOURCE # 14	37	20	62	0	0	0	2
SOURCE # 15	37	20	62	0	0	0	2
SOURCE # 16	51	37	70	0	0	0	3
SOURCE # 17	46	23	59	0	0	0	0
SOURCE # 18	46	23	59	0	0	0	0
SOURCE # 19	46	23	59	0	0	0	0
SOURCE # 20	46	23	59	0	0	0	0
SOURCE # 21	46	23	59	0	0	0	0
SOURCE # 22	47	23	59	0	0	0	0
SOURCE # 23	61	49	60	0	0	0	1
SOURCE # 24	42	21	61	0	0	0	1
SOURCE # 25	42	21	61	0	0	0	1
SOURCE # 26	42	21	61	0	0	0	1
SOURCE # 27	42	21	61	0	0	0	1
SOURCE # 28	42	21	61	0	0	0	1
SOURCE # 29	42	21	61	0	0	0	1
SOURCE # 30	57	44	65	0	0	0	1
SOURCE # 31	45	22	60	0	0	0	1
SOURCE # 32	45	22	60	0	0	0	1
SOURCE # 33	45	22	60	0	0	0	1
SOURCE # 34	45	22	60	0	0	0	1
SOURCE # 35	45	22	60	0	0	0	1
SOURCE # 36	45	22	60	0	0	0	0
SOURCE # 37	59	47	62	0	0	0	1
SOURCE # 38	45	26	67	0	0	0	0
SOURCE # 39	44	26	67	0	0	0	0
SOURCE # 40	44	26	67	0	0	0	0
SOURCE # 41	44	25	67	0	0	0	1
SOURCE # 42	44	25	67	0	0	0	1

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SOURCE # 43	44	25	67	0	0	0	1
SOURCE # 44	47	27	65	0	0	0	0
SOURCE # 45	47	27	65	0	0	0	0
SOURCE # 46	46	27	65	0	0	0	0
SOURCE # 47	49	30	63	0	0	0	0
SOURCE # 48	49	30	63	0	0	0	0
SOURCE # 49	49	30	63	0	0	0	0
SOURCE # 50	46	23	59	0	0	0	0
SOURCE # 51	46	23	59	0	0	0	0
BACKGROUND	0	65					

TOTAL wo bkg 70 53
TOTAL w bkg 70 65

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 6	STS-HouseGMH	81823	39370	547	
SOURCE # 1	Primary Crusher	79767	41378	548	2873
SOURCE # 2	SAG Mill	80714	41311	556	2236
SOURCE # 3	Ball Mill	80812	41287	556	2167
SOURCE # 4	Regrind Mill 1	80996	41228	559	2033
SOURCE # 5	Regrind Mill 2	81013	41223	559	2022
SOURCE # 6	Regrind Mill 3	81031	41219	559	2011
SOURCE # 7	Regrind Mill 4	80991	41208	559	2017
SOURCE # 8	Regrind Mill 5	81008	41204	559	2006
SOURCE # 9	Regrind Mill 6	81026	41199	559	1995
SOURCE # 10	ROSAHT 1	71900	35000	680	10843
SOURCE # 11	ROSAHT 2	71850	34950	680	10909
SOURCE # 12	ROSAHT 3	71800	34900	680	10975
SOURCE # 13	ROSADZ 1	71750	34850	680	11041
SOURCE # 14	ROSADZ 2	71700	34800	680	11107
SOURCE # 15	ROSADZ 3	71650	34750	680	11173
SOURCE # 16	ROSA BUA	71910	35010	675	10830
SOURCE # 17	JPHT 1	78200	39000	680	3644
SOURCE # 18	JPHT 2	78150	38950	680	3699
SOURCE # 19	JPHT 3	78100	38900	680	3754
SOURCE # 20	JPDZ 1	78050	38850	680	3811
SOURCE # 21	JPDZ 2	78000	38800	680	3867
SOURCE # 22	JPDZ 3	78210	39010	680	3633
SOURCE # 23	JPBU	78210	39010	680	3633
SOURCE # 24	HOSAHT 1	77400	43400	720	5986
SOURCE # 25	HOSAHT 2	77350	43350	720	5989
SOURCE # 26	HOSAHT 3	77300	43300	720	5994
SOURCE # 27	HOSADZ 1	77250	43250	720	5999
SOURCE # 28	HOSADZ 2	77200	43200	720	6005
SOURCE # 29	HOSADZ 3	77150	43150	720	6012
SOURCE # 30	HOSABU	77410	43410	720	5985
SOURCE # 31	JOSAHT 1	80600	43700	630	4500
SOURCE # 32	JOSAHT 2	80550	43650	630	4466
SOURCE # 33	JOSAHT 3	80500	43600	630	4432
SOURCE # 34	JOSADZ 1	80450	43550	630	4400
SOURCE # 35	JOSADZ 2	80400	43500	630	4369
SOURCE # 36	JOSADZ 3	80350	43450	630	4338
SOURCE # 37	JOSABU	80610	43710	630	4507
SOURCE # 38	CPDRILL 1	75500	33700	460	8493
SOURCE # 39	CPDRILL 2	75450	33650	460	8563
SOURCE # 40	CPDRILL 3	75400	33600	460	8634
SOURCE # 41	SPDRILL 1	74000	34800	480	9060
SOURCE # 42	SPDRILL 2	73950	34750	480	9128

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SOURCE # 43	SPDRILL 3	73900	34700	480	9197
SOURCE # 44	SKPDRILL 1	75600	42100	420	6796
SOURCE # 45	SKPDRILL 2	75550	42050	420	6822
SOURCE # 46	SKPDRILL 3	75500	42000	420	6849
SOURCE # 47	LPDRILL 1	76900	39600	440	4929
SOURCE # 48	LPDRILL 2	76850	39550	440	4977
SOURCE # 49	LPDRILL 3	76800	39500	440	5025
SOURCE # 50	TSFHT	85300	37500	620	3948
SOURCE # 51	TSFDZ	85250	37450	620	3928

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	68	63	59	60	34	26	2	0	0
0									
A-wt	28	37	43	52	30	26	3	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 7 - STS-GMH-Rt265 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	51	26	66	0	0	0	1
SOURCE # 2	52	27	65	0	0	0	1
SOURCE # 3	52	27	65	0	0	0	1
SOURCE # 4	45	20	59	0	0	0	0
SOURCE # 5	45	20	59	0	0	0	0
SOURCE # 6	45	20	59	0	0	0	0
SOURCE # 7	45	20	58	0	0	0	0
SOURCE # 8	45	20	58	0	0	0	0
SOURCE # 9	45	20	58	0	0	0	0
SOURCE # 10	33	19	63	0	0	0	2
SOURCE # 11	33	19	63	0	0	0	2
SOURCE # 12	33	19	63	0	0	0	2
SOURCE # 13	33	19	63	0	0	0	2
SOURCE # 14	33	19	63	0	0	0	2
SOURCE # 15	33	19	63	0	0	0	2
SOURCE # 16	47	33	73	0	0	0	4
SOURCE # 17	38	20	62	0	0	0	1
SOURCE # 18	38	20	62	0	0	0	1
SOURCE # 19	38	20	62	0	0	0	1
SOURCE # 20	38	20	62	0	0	0	1
SOURCE # 21	38	20	62	0	0	0	1
SOURCE # 22	39	20	62	0	0	0	1
SOURCE # 23	53	39	68	0	0	0	2
SOURCE # 24	37	20	62	0	0	0	2
SOURCE # 25	37	20	62	0	0	0	2
SOURCE # 26	37	20	62	0	0	0	2
SOURCE # 27	37	20	62	0	0	0	2
SOURCE # 28	37	20	62	0	0	0	2
SOURCE # 29	37	20	62	0	0	0	2
SOURCE # 30	51	38	70	0	0	0	3
SOURCE # 31	40	20	62	0	0	0	1
SOURCE # 32	40	20	62	0	0	0	1
SOURCE # 33	40	20	62	0	0	0	1
SOURCE # 34	40	20	62	0	0	0	1
SOURCE # 35	40	20	62	0	0	0	1
SOURCE # 36	40	20	62	0	0	0	1
SOURCE # 37	54	41	67	0	0	0	2
SOURCE # 38	40	23	70	0	0	0	1
SOURCE # 39	40	23	70	0	0	0	1

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SOURCE # 40	40	23	70	0	0	0	1
SOURCE # 41	40	22	70	0	0	0	1
SOURCE # 42	40	22	70	0	0	0	1
SOURCE # 43	40	22	70	0	0	0	1
SOURCE # 44	41	23	69	0	0	0	1
SOURCE # 45	41	23	69	0	0	0	1
SOURCE # 46	41	23	69	0	0	0	1
SOURCE # 47	43	24	68	0	0	0	1
SOURCE # 48	43	24	68	0	0	0	1
SOURCE # 49	43	24	68	0	0	0	1
SOURCE # 50	48	24	58	0	0	0	0
SOURCE # 51	48	24	58	0	0	0	0
BACKGROUND	8	62					

□

TOTAL wo bkg	62	46
TOTAL w bkg	62	62

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER # 7	STS-GMH-Rt265		87322	39946	568	
SOURCE # 1	Primary Crusher		79767	41378	548	7689
SOURCE # 2	SAG Mill		80714	41311	556	6747
SOURCE # 3	Ball Mill		80812	41287	556	6646
SOURCE # 4	Regrind Mill 1		80996	41228	559	6454
SOURCE # 5	Regrind Mill 2		81013	41223	559	6436
SOURCE # 6	Regrind Mill 3		81031	41219	559	6418
SOURCE # 7	Regrind Mill 4		80991	41208	559	6455
SOURCE # 8	Regrind Mill 5		81008	41204	559	6438
SOURCE # 9	Regrind Mill 6		81026	41199	559	6419
SOURCE # 10	ROSAHT 1		71900	35000	680	16196
SOURCE # 11	ROSAHT 2		71850	34950	680	16259
SOURCE # 12	ROSAHT 3		71800	34900	680	16322
SOURCE # 13	ROSADZ 1		71750	34850	680	16385
SOURCE # 14	ROSADZ 2		71700	34800	680	16448
SOURCE # 15	ROSADZ 3		71650	34750	680	16511
SOURCE # 16	ROSA BUA		71910	35010	675	16183
SOURCE # 17	JPHT 1		78200	39000	680	9171
SOURCE # 18	JPHT 2		78150	38950	680	9226
SOURCE # 19	JPHT 3		78100	38900	680	9281
SOURCE # 20	JPDZ 1		78050	38850	680	9337
SOURCE # 21	JPDZ 2		78000	38800	680	9392
SOURCE # 22	JPDZ3		78210	39010	680	9160
SOURCE # 23	JPBU		78210	39010	680	9160
SOURCE # 24	HOSAHT 1		77400	43400	720	10507
SOURCE # 25	HOSAHT 2		77350	43350	720	10538
SOURCE # 26	HOSAHT 3		77300	43300	720	10569
SOURCE # 27	HOSADZ 1		77250	43250	720	10601
SOURCE # 28	HOSADZ 2		77200	43200	720	10633
SOURCE # 29	HOSADZ 3		77150	43150	720	10665
SOURCE # 30	HOSABU		77410	43410	720	10500
SOURCE # 31	JOSAHT 1		80600	43700	630	7699
SOURCE # 32	JOSAHT 2		80550	43650	630	7719
SOURCE # 33	JOSAHT 3		80500	43600	630	7739
SOURCE # 34	JOSADZ 1		80450	43550	630	7759
SOURCE # 35	JOSADZ 2		80400	43500	630	7781
SOURCE # 36	JOSADZ 3		80350	43450	630	7803
SOURCE # 37	JOSABU		80610	43710	630	7695
SOURCE # 38	CPDRILL 1		75500	33700	460	13371
SOURCE # 39	CPDRILL 2		75450	33650	460	13438

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SOURCE # 40	CPDRILL 3	75400	33600	460	13506
SOURCE # 41	SPDRILL 1	74000	34800	480	14281
SOURCE # 42	SPDRILL 2	73950	34750	480	14346
SOURCE # 43	SPDRILL 3	73900	34700	480	14411
SOURCE # 44	SKPDRILL 1	75600	42100	420	11919
SOURCE # 45	SKPDRILL 2	75550	42050	420	11959
SOURCE # 46	SKPDRILL 3	75500	42000	420	12000
SOURCE # 47	LPDRILL 1	76900	39600	440	10428
SOURCE # 48	LPDRILL 2	76850	39550	440	10480
SOURCE # 49	LPDRILL 3	76800	39500	440	10532
SOURCE # 50	TSFHT	85300	37500	620	3174
SOURCE # 51	TSFDZ	85250	37450	620	3244

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	60	55	53	53	24	14	0	0	0
0									
A-wt	20	29	36	44	20	14	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 8 - STS-SOR219 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	55	30	62	0	0	0	1
SOURCE # 2	57	32	61	0	0	0	0
SOURCE # 3	57	32	61	0	0	0	0
SOURCE # 4	49	21	57	0	0	0	0
SOURCE # 5	49	21	57	0	0	0	0
SOURCE # 6	49	21	57	0	0	0	0
SOURCE # 7	49	21	57	0	0	0	0
SOURCE # 8	49	21	57	0	0	0	0
SOURCE # 9	49	21	57	0	0	0	0
SOURCE # 10	34	19	63	0	0	0	2
SOURCE # 11	34	19	63	0	0	0	2
SOURCE # 12	34	19	63	0	0	0	2
SOURCE # 13	34	19	63	0	0	0	2
SOURCE # 14	34	19	63	0	0	0	2
SOURCE # 15	34	19	63	0	0	0	2
SOURCE # 16	48	34	73	0	0	0	4
SOURCE # 17	40	20	61	0	0	0	1
SOURCE # 18	40	20	62	0	0	0	1
SOURCE # 19	40	20	62	0	0	0	1
SOURCE # 20	40	20	62	0	0	0	1
SOURCE # 21	40	20	62	0	0	0	1
SOURCE # 22	40	20	62	0	0	0	1
SOURCE # 23	55	42	67	0	0	0	2
SOURCE # 24	41	21	61	0	0	0	1
SOURCE # 25	41	21	61	0	0	0	1
SOURCE # 26	41	21	61	0	0	0	1
SOURCE # 27	41	21	61	0	0	0	1
SOURCE # 28	41	21	61	0	0	0	1
SOURCE # 29	41	21	61	0	0	0	1
SOURCE # 30	56	43	66	0	0	0	2
SOURCE # 31	47	24	58	0	0	0	0
SOURCE # 32	47	24	58	0	0	0	0
SOURCE # 33	47	23	58	0	0	0	0
SOURCE # 34	47	23	58	0	0	0	0
SOURCE # 35	47	23	59	0	0	0	0
SOURCE # 36	47	23	59	0	0	0	0

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SOURCE # 37	62	50	60	0	0	0	1
SOURCE # 38	41	23	69	0	0	0	1
SOURCE # 39	41	23	69	0	0	0	1
SOURCE # 40	41	23	69	0	0	0	1
SOURCE # 41	40	23	70	0	0	0	1
SOURCE # 42	40	23	70	0	0	0	1
SOURCE # 43	40	23	70	0	0	0	1
SOURCE # 44	44	26	67	0	0	0	0
SOURCE # 45	44	26	67	0	0	0	0
SOURCE # 46	44	26	67	0	0	0	0
SOURCE # 47	45	26	66	0	0	0	0
SOURCE # 48	45	26	67	0	0	0	0
SOURCE # 49	45	26	67	0	0	0	0
SOURCE # 50	42	21	61	0	0	0	1
SOURCE # 51	42	21	61	0	0	0	1
BACKGROUND	0	59					

□

TOTAL wo bkg	67	52
TOTAL w bkg	67	59

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 8	STS-SOR219	83995	43603	549	
SOURCE # 1	Primary Crusher	79767	41378	548	4777
SOURCE # 2	SAG Mill	80714	41311	556	4001
SOURCE # 3	Ball Mill	80812	41287	556	3935
SOURCE # 4	Regrind Mill 1	80996	41228	559	3825
SOURCE # 5	Regrind Mill 2	81013	41223	559	3815
SOURCE # 6	Regrind Mill 3	81031	41219	559	3803
SOURCE # 7	Regrind Mill 4	80991	41208	559	3841
SOURCE # 8	Regrind Mill 5	81008	41204	559	3831
SOURCE # 9	Regrind Mill 6	81026	41199	559	3820
SOURCE # 10	ROSAHT 1	71900	35000	680	14843
SOURCE # 11	ROSAHT 2	71850	34950	680	14912
SOURCE # 12	ROSAHT 3	71800	34900	680	14982
SOURCE # 13	ROSADZ 1	71750	34850	680	15052
SOURCE # 14	ROSADZ 2	71700	34800	680	15122
SOURCE # 15	ROSADZ 3	71650	34750	680	15191
SOURCE # 16	ROSA BUA	71910	35010	675	14829
SOURCE # 17	JPHT 1	78200	39000	680	7401
SOURCE # 18	JPHT 2	78150	38950	680	7472
SOURCE # 19	JPHT 3	78100	38900	680	7542
SOURCE # 20	JPDZ 1	78050	38850	680	7612
SOURCE # 21	JPDZ 2	78000	38800	680	7682
SOURCE # 22	JPDZ3	78210	39010	680	7387
SOURCE # 23	JPBU	78210	39010	680	7387
SOURCE # 24	HOSAHT 1	77400	43400	720	6600
SOURCE # 25	HOSAHT 2	77350	43350	720	6652
SOURCE # 26	HOSAHT 3	77300	43300	720	6704
SOURCE # 27	HOSADZ 1	77250	43250	720	6756
SOURCE # 28	HOSADZ 2	77200	43200	720	6809
SOURCE # 29	HOSADZ 3	77150	43150	720	6862
SOURCE # 30	HOSABU	77410	43410	720	6590
SOURCE # 31	JOSAHT 1	80600	43700	630	3397
SOURCE # 32	JOSAHT 2	80550	43650	630	3446
SOURCE # 33	JOSAHT 3	80500	43600	630	3495
SOURCE # 34	JOSADZ 1	80450	43550	630	3546
SOURCE # 35	JOSADZ 2	80400	43500	630	3597
SOURCE # 36	JOSADZ 3	80350	43450	630	3649

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SOURCE # 37	JOSABU	80610	43710	630	3387
SOURCE # 38	CPDRILL 1	75500	33700	460	13047
SOURCE # 39	CPDRILL 2	75450	33650	460	13118
SOURCE # 40	CPDRILL 3	75400	33600	460	13188
SOURCE # 41	SPDRILL 1	74000	34800	480	13319
SOURCE # 42	SPDRILL 2	73950	34750	480	13389
SOURCE # 43	SPDRILL 3	73900	34700	480	13460
SOURCE # 44	SKPDRILL 1	75600	42100	420	8529
SOURCE # 45	SKPDRILL 2	75550	42050	420	8587
SOURCE # 46	SKPDRILL 3	75500	42000	420	8645
SOURCE # 47	LPDRILL 1	76900	39600	440	8147
SOURCE # 48	LPDRILL 2	76850	39550	440	8215
SOURCE # 49	LPDRILL 3	76800	39500	440	8283
SOURCE # 50	TSFHT	85300	37500	620	6241
SOURCE # 51	TSFDZ	85250	37450	620	6280

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	64	59	57	59	30	25	0	0	0
0									
A-wt	25	33	41	51	27	25	1	1	-2
-7									
0									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 9 - STS-5099GMH -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	47	23	69	0	0	0	2
SOURCE # 2	48	24	68	0	0	0	2
SOURCE # 3	48	24	68	0	0	0	2
SOURCE # 4	41	19	59	0	0	0	0
SOURCE # 5	41	19	59	0	0	0	0
SOURCE # 6	41	19	59	0	0	0	0
SOURCE # 7	41	19	59	0	0	0	0
SOURCE # 8	41	19	59	0	0	0	0
SOURCE # 9	41	19	59	0	0	0	0
SOURCE # 10	32	19	63	0	0	0	3
SOURCE # 11	32	19	63	0	0	0	3
SOURCE # 12	32	19	63	0	0	0	3
SOURCE # 13	32	19	63	0	0	0	3
SOURCE # 14	32	19	63	0	0	0	3
SOURCE # 15	32	19	63	0	0	0	3
SOURCE # 16	45	30	75	0	0	0	5
SOURCE # 17	36	19	62	0	0	0	2
SOURCE # 18	36	19	62	0	0	0	2
SOURCE # 19	36	19	62	0	0	0	2
SOURCE # 20	36	19	62	0	0	0	2
SOURCE # 21	36	19	62	0	0	0	2
SOURCE # 22	36	20	63	0	0	0	2
SOURCE # 23	50	36	71	0	0	0	3
SOURCE # 24	35	19	63	0	0	0	2
SOURCE # 25	35	19	63	0	0	0	2
SOURCE # 26	35	19	63	0	0	0	2
SOURCE # 27	35	19	63	0	0	0	2
SOURCE # 28	35	19	63	0	0	0	2
SOURCE # 29	35	19	63	0	0	0	2
SOURCE # 30	48	34	72	0	0	0	4
SOURCE # 31	37	20	62	0	0	0	2
SOURCE # 32	37	20	62	0	0	0	2
SOURCE # 33	37	20	62	0	0	0	2

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SOURCE # 34	37	20	62	0	0	0	2
SOURCE # 35	37	20	62	0	0	0	2
SOURCE # 36	37	20	62	0	0	0	2
SOURCE # 37	51	37	70	0	0	0	3
SOURCE # 38	39	22	70	0	0	0	1
SOURCE # 39	39	22	70	0	0	0	1
SOURCE # 40	39	22	70	0	0	0	1
SOURCE # 41	38	22	71	0	0	0	1
SOURCE # 42	38	22	71	0	0	0	1
SOURCE # 43	38	22	71	0	0	0	1
SOURCE # 44	39	22	70	0	0	0	1
SOURCE # 45	39	22	70	0	0	0	1
SOURCE # 46	39	22	70	0	0	0	1
SOURCE # 47	40	23	70	0	0	0	1
SOURCE # 48	40	23	70	0	0	0	1
SOURCE # 49	40	23	70	0	0	0	1
SOURCE # 50	43	21	61	0	0	0	1
SOURCE # 51	43	21	61	0	0	0	1
BACKGROUND	0	94					

□

TOTAL wo bkg	59	43
TOTAL w bkg	59	94

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 9	STS-5099GMH	90708	38956	576	
SOURCE # 1	Primary Crusher	79767	41378	548	11205
SOURCE # 2	SAG Mill	80714	41311	556	10267
SOURCE # 3	Ball Mill	80812	41287	556	10166
SOURCE # 4	Regrind Mill 1	80996	41228	559	9974
SOURCE # 5	Regrind Mill 2	81013	41223	559	9956
SOURCE # 6	Regrind Mill 3	81031	41219	559	9938
SOURCE # 7	Regrind Mill 4	80991	41208	559	9974
SOURCE # 8	Regrind Mill 5	81008	41204	559	9957
SOURCE # 9	Regrind Mill 6	81026	41199	559	9938
SOURCE # 10	ROSAHT 1	71900	35000	680	19219
SOURCE # 11	ROSAHT 2	71850	34950	680	19279
SOURCE # 12	ROSAHT 3	71800	34900	680	19338
SOURCE # 13	ROSADZ 1	71750	34850	680	19397
SOURCE # 14	ROSADZ 2	71700	34800	680	19457
SOURCE # 15	ROSADZ 3	71650	34750	680	19516
SOURCE # 16	ROSA BUA	71910	35010	675	19207
SOURCE # 17	JPHT 1	78200	39000	680	12508
SOURCE # 18	JPHT 2	78150	38950	680	12558
SOURCE # 19	JPHT 3	78100	38900	680	12608
SOURCE # 20	JPDZ 1	78050	38850	680	12658
SOURCE # 21	JPDZ 2	78000	38800	680	12709
SOURCE # 22	JPDZ3	78210	39010	680	12498
SOURCE # 23	JPBU	78210	39010	680	12498
SOURCE # 24	HOSAHT 1	77400	43400	720	14031
SOURCE # 25	HOSAHT 2	77350	43350	720	14062
SOURCE # 26	HOSAHT 3	77300	43300	720	14094
SOURCE # 27	HOSADZ 1	77250	43250	720	14127
SOURCE # 28	HOSADZ 2	77200	43200	720	14159
SOURCE # 29	HOSADZ 3	77150	43150	720	14192
SOURCE # 30	HOSABU	77410	43410	720	14024
SOURCE # 31	JOSAHT 1	80600	43700	630	11166
SOURCE # 32	JOSAHT 2	80550	43650	630	11190
SOURCE # 33	JOSAHT 3	80500	43600	630	11214

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SOURCE # 34	JOSADZ 1	80450	43550	630	11239
SOURCE # 35	JOSADZ 2	80400	43500	630	11265
SOURCE # 36	JOSADZ 3	80350	43450	630	11291
SOURCE # 37	JOSABU	80610	43710	630	11161
SOURCE # 38	CPDRILL 1	75500	33700	460	16091
SOURCE # 39	CPDRILL 2	75450	33650	460	16154
SOURCE # 40	CPDRILL 3	75400	33600	460	16218
SOURCE # 41	SPDRILL 1	74000	34800	480	17217
SOURCE # 42	SPDRILL 2	73950	34750	480	17278
SOURCE # 43	SPDRILL 3	73900	34700	480	17338
SOURCE # 44	SKPDRILL 1	75600	42100	420	15432
SOURCE # 45	SKPDRILL 2	75550	42050	420	15471
SOURCE # 46	SKPDRILL 3	75500	42000	420	15510
SOURCE # 47	LPDRILL 1	76900	39600	440	13823
SOURCE # 48	LPDRILL 2	76850	39550	440	13871
SOURCE # 49	LPDRILL 3	76800	39500	440	13919
SOURCE # 50	TSFHT	85300	37500	620	5600
SOURCE # 51	TSFDZ	85250	37450	620	5662

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	56	52	50	49	18	6	0	0	0
0									
A-wt	17	26	33	41	15	6	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 10 - STS-SR29/204 -

PROJECT - HGMWC

CONTRIBUTOR			SPL		DBA ATTENUATION FROM REF. DISTANCE				
			DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1		47	23	69	0	0	0	2
SOURCE #	2		48	24	69	0	0	0	2
SOURCE #	3		48	24	68	0	0	0	2
SOURCE #	4		40	19	59	0	0	0	0
SOURCE #	5		40	19	59	0	0	0	0
SOURCE #	6		40	19	59	0	0	0	0
SOURCE #	7		40	19	59	0	0	0	0
SOURCE #	8		40	19	59	0	0	0	0
SOURCE #	9		40	19	59	0	0	0	0
SOURCE #	10		32	19	63	0	0	0	3
SOURCE #	11		32	19	63	0	0	0	3
SOURCE #	12		32	19	63	0	0	0	3
SOURCE #	13		32	19	63	0	0	0	3
SOURCE #	14		32	19	63	0	0	0	3
SOURCE #	15		32	19	63	0	0	0	3
SOURCE #	16		45	30	75	0	0	0	5
SOURCE #	17		35	19	63	0	0	0	2
SOURCE #	18		35	19	63	0	0	0	2
SOURCE #	19		35	19	63	0	0	0	2
SOURCE #	20		35	19	63	0	0	0	2
SOURCE #	21		35	19	63	0	0	0	2
SOURCE #	22		35	19	63	0	0	0	2
SOURCE #	23		49	35	72	0	0	0	4
SOURCE #	24		34	19	63	0	0	0	2
SOURCE #	25		34	19	63	0	0	0	2
SOURCE #	26		34	19	63	0	0	0	2
SOURCE #	27		34	19	63	0	0	0	2
SOURCE #	28		34	19	63	0	0	0	2
SOURCE #	29		34	19	63	0	0	0	2
SOURCE #	30		48	34	72	0	0	0	4

STS&PropResults-L-Peak.TXT

SOURCE # 31	36	20	62	0	0	0	2
SOURCE # 32	36	20	62	0	0	0	2
SOURCE # 33	36	20	62	0	0	0	2
SOURCE # 34	36	20	62	0	0	0	2
SOURCE # 35	36	20	62	0	0	0	2
SOURCE # 36	36	20	62	0	0	0	2
SOURCE # 37	50	37	71	0	0	0	3
SOURCE # 38	38	22	71	0	0	0	1
SOURCE # 39	38	22	71	0	0	0	1
SOURCE # 40	38	22	71	0	0	0	1
SOURCE # 41	38	21	71	0	0	0	1
SOURCE # 42	38	21	71	0	0	0	1
SOURCE # 43	37	21	71	0	0	0	1
SOURCE # 44	39	22	70	0	0	0	1
SOURCE # 45	39	22	70	0	0	0	1
SOURCE # 46	39	22	70	0	0	0	1
SOURCE # 47	40	22	70	0	0	0	1
SOURCE # 48	40	22	70	0	0	0	1
SOURCE # 49	39	22	70	0	0	0	1
SOURCE # 50	41	21	61	0	0	0	1
SOURCE # 51	41	21	61	0	0	0	1
BACKGROUND	0	93					

□

TOTAL wo bkg	58	42
TOTAL w bkg	58	93

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 10	STS-SR29/204	91534	39553	576	
SOURCE # 1	Primary Crusher	79767	41378	548	11907
SOURCE # 2	SAG Mill	80714	41311	556	10961
SOURCE # 3	Ball Mill	80812	41287	556	10860
SOURCE # 4	Regrind Mill 1	80996	41228	559	10670
SOURCE # 5	Regrind Mill 2	81013	41223	559	10652
SOURCE # 6	Regrind Mill 3	81031	41219	559	10634
SOURCE # 7	Regrind Mill 4	80991	41208	559	10672
SOURCE # 8	Regrind Mill 5	81008	41204	559	10654
SOURCE # 9	Regrind Mill 6	81026	41199	559	10636
SOURCE # 10	ROSAHT 1	71900	35000	680	20155
SOURCE # 11	ROSAHT 2	71850	34950	680	20215
SOURCE # 12	ROSAHT 3	71800	34900	680	20275
SOURCE # 13	ROSADZ 1	71750	34850	680	20335
SOURCE # 14	ROSADZ 2	71700	34800	680	20395
SOURCE # 15	ROSADZ 3	71650	34750	680	20456
SOURCE # 16	ROSA BUA	71910	35010	675	20143
SOURCE # 17	JPHT 1	78200	39000	680	13345
SOURCE # 18	JPHT 2	78150	38950	680	13397
SOURCE # 19	JPHT 3	78100	38900	680	13450
SOURCE # 20	JPDZ 1	78050	38850	680	13502
SOURCE # 21	JPDZ 2	78000	38800	680	13555
SOURCE # 22	JPDZ3	78210	39010	680	13335
SOURCE # 23	JPBU	78210	39010	680	13335
SOURCE # 24	HOSAHT 1	77400	43400	720	14648
SOURCE # 25	HOSAHT 2	77350	43350	720	14684
SOURCE # 26	HOSAHT 3	77300	43300	720	14719
SOURCE # 27	HOSADZ 1	77250	43250	720	14755
SOURCE # 28	HOSADZ 2	77200	43200	720	14791
SOURCE # 29	HOSADZ 3	77150	43150	720	14827
SOURCE # 30	HOSABU	77410	43410	720	14641

HGMWC.TXT
 GEOSONICS SOUND-CALC SOUND PROJECTIONS
 AT RECEIVER # 1 - Greg561 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE					
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.	
SOURCE # 1	52	27	65	0	0	0	1	
SOURCE # 2	52	27	65	0	0	0	1	
SOURCE # 3	52	27	65	0	0	0	1	
SOURCE # 4	44	20	59	0	0	0	0	
SOURCE # 5	44	20	59	0	0	0	0	
SOURCE # 6	44	20	59	0	0	0	0	
SOURCE # 7	44	20	59	0	0	0	0	
SOURCE # 8	44	20	59	0	0	0	0	
SOURCE # 9	44	20	59	0	0	0	0	
SOURCE # 10	43	21	61	0	0	0	1	
SOURCE # 11	43	21	61	0	0	0	1	
SOURCE # 12	43	21	61	0	0	0	1	
SOURCE # 13	43	21	61	0	0	0	1	
SOURCE # 14	43	21	61	0	0	0	1	
SOURCE # 15	42	21	61	0	0	0	1	
SOURCE # 16	58	45	64	0	0	0	1	
SOURCE # 17	46	23	59	0	0	0	0	
SOURCE # 18	46	23	59	0	0	0	0	
SOURCE # 19	46	23	59	0	0	0	0	
SOURCE # 20	46	23	59	0	0	0	0	
SOURCE # 21	46	23	59	0	0	0	0	
SOURCE # 22	46	23	59	0	0	0	0	
SOURCE # 23	61	48	61	0	0	0	1	
SOURCE # 24	39	20	62	0	0	0	1	
SOURCE # 25	39	20	62	0	0	0	1	
SOURCE # 26	40	20	62	0	0	0	1	
SOURCE # 27	40	20	62	0	0	0	1	
SOURCE # 28	40	20	62	0	0	0	1	
SOURCE # 29	40	20	62	0	0	0	1	
SOURCE # 30	54	41	68	0	0	0	2	
SOURCE # 31	39	20	62	0	0	0	1	
SOURCE # 32	39	20	62	0	0	0	1	
SOURCE # 33	39	20	62	0	0	0	1	
SOURCE # 34	39	20	62	0	0	0	1	
SOURCE # 35	39	20	62	0	0	0	1	
SOURCE # 36	39	20	62	0	0	0	1	
SOURCE # 37	53	39	68	0	0	0	2	
SOURCE # 38	56	36	57	0	0	0	0	
SOURCE # 39	56	36	57	0	0	0	0	
SOURCE # 40	55	36	57	0	0	0	0	
SOURCE # 41	53	33	60	0	0	0	0	
SOURCE # 42	53	33	60	0	0	0	0	
SOURCE # 43	52	33	60	0	0	0	0	
SOURCE # 44	46	27	66	0	0	0	0	
SOURCE # 45	46	27	66	0	0	0	0	
SOURCE # 46	46	27	66	0	0	0	0	
SOURCE # 47	50	31	62	0	0	0	0	
SOURCE # 48	50	31	62	0	0	0	0	
SOURCE # 49	50	31	62	0	0	0	0	
SOURCE # 50	39	20	62	0	0	0	1	
SOURCE # 51	39	20	62	0	0	0	1	
BACKGROUND	0	0						

□

TOTAL wo bkg	67	52
TOTAL w bkg	67	52

HGMWC.TXT
 TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	1 Greg561	77384	35138	520	
SOURCE #	1 Primary Crusher	79767	41378	548	6679
SOURCE #	2 SAG Mill	80714	41311	556	7015
SOURCE #	3 Ball Mill	80812	41287	556	7040
SOURCE #	4 Regrind Mill 1	80996	41228	559	7080
SOURCE #	5 Regrind Mill 2	81013	41223	559	7085
SOURCE #	6 Regrind Mill 3	81031	41219	559	7090
SOURCE #	7 Regrind Mill 4	80991	41208	559	7060
SOURCE #	8 Regrind Mill 5	81008	41204	559	7066
SOURCE #	9 Regrind Mill 6	81026	41199	559	7071
SOURCE #	10 ROSAHT 1	71900	35000	680	5488
SOURCE #	11 ROSAHT 2	71850	34950	680	5539
SOURCE #	12 ROSAHT 3	71800	34900	680	5591
SOURCE #	13 ROSADZ 1	71750	34850	680	5643
SOURCE #	14 ROSADZ 2	71700	34800	680	5696
SOURCE #	15 ROSADZ 3	71650	34750	680	5749
SOURCE #	16 ROSA BUA	71910	35010	675	5477
SOURCE #	17 JPHT 1	78200	39000	680	3950
SOURCE #	18 JPHT 2	78150	38950	680	3891
SOURCE #	19 JPHT 3	78100	38900	680	3832
SOURCE #	20 JPDZ 1	78050	38850	680	3774
SOURCE #	21 JPDZ 2	78000	38800	680	3716
SOURCE #	22 JPDZ3	78210	39010	680	3962
SOURCE #	23 JPBU	78210	39010	680	3962
SOURCE #	24 HOSAHT 1	77400	43400	720	8264
SOURCE #	25 HOSAHT 2	77350	43350	720	8214
SOURCE #	26 HOSAHT 3	77300	43300	720	8164
SOURCE #	27 HOSADZ 1	77250	43250	720	8115
SOURCE #	28 HOSADZ 2	77200	43200	720	8066
SOURCE #	29 HOSADZ 3	77150	43150	720	8017
SOURCE #	30 HOSABU	77410	43410	720	8274
SOURCE #	31 JOSAH 1	80600	43700	630	9146
SOURCE #	32 JOSAH 2	80550	43650	630	9082
SOURCE #	33 JOSAH 3	80500	43600	630	9018
SOURCE #	34 JOSADZ 1	80450	43550	630	8954
SOURCE #	35 JOSADZ 2	80400	43500	630	8889
SOURCE #	36 JOSADZ 3	80350	43450	630	8826
SOURCE #	37 JOSABU	80610	43710	630	9159
SOURCE #	38 CPDRILL 1	75500	33700	460	2370
SOURCE #	39 CPDRILL 2	75450	33650	460	2440
SOURCE #	40 CPDRILL 3	75400	33600	460	2511
SOURCE #	41 SPDRILL 1	74000	34800	480	3401
SOURCE #	42 SPDRILL 2	73950	34750	480	3456
SOURCE #	43 SPDRILL 3	73900	34700	480	3511
SOURCE #	44 SKPDRILL 1	75600	42100	420	7187
SOURCE #	45 SKPDRILL 2	75550	42050	420	7151
SOURCE #	46 SKPDRILL 3	75500	42000	420	7116
SOURCE #	47 LPDRILL 1	76900	39600	440	4488
SOURCE #	48 LPDRILL 2	76850	39550	440	4444
SOURCE #	49 LPDRILL 3	76800	39500	440	4401
SOURCE #	50 TSFHT	85300	37500	620	8261
SOURCE #	51 TSFDZ	85250	37450	620	8199

PROJECTED OCTAVE LEVELS:
 OCTAVE 31.5 63 125 250 500 1000 2K 4K 8000
 16K
 LINEAR 63 62 60 59 30 24 1 0 0

HGMWC.TXT

0
A-wt 23 36 44 50 27 24 2 1 -2
-7
0

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 2 - Greg565 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE					ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS		
SOURCE # 1	52	27	65	0	0	0	1	
SOURCE # 2	52	27	65	0	0	0	1	
SOURCE # 3	52	27	65	0	0	0	1	
SOURCE # 4	44	20	59	0	0	0	0	
SOURCE # 5	44	20	59	0	0	0	0	
SOURCE # 6	44	20	59	0	0	0	0	
SOURCE # 7	44	20	59	0	0	0	0	
SOURCE # 8	44	20	59	0	0	0	0	
SOURCE # 9	44	20	59	0	0	0	0	
SOURCE # 10	43	21	60	0	0	0	1	
SOURCE # 11	43	21	60	0	0	0	1	
SOURCE # 12	43	21	60	0	0	0	1	
SOURCE # 13	43	21	61	0	0	0	1	
SOURCE # 14	43	21	61	0	0	0	1	
SOURCE # 15	43	21	61	0	0	0	1	
SOURCE # 16	58	45	64	0	0	0	1	
SOURCE # 17	46	23	59	0	0	0	0	
SOURCE # 18	46	23	59	0	0	0	0	
SOURCE # 19	46	23	59	0	0	0	0	
SOURCE # 20	47	23	58	0	0	0	0	
SOURCE # 21	47	23	58	0	0	0	0	
SOURCE # 22	46	23	59	0	0	0	0	
SOURCE # 23	61	49	61	0	0	0	1	
SOURCE # 24	40	20	62	0	0	0	1	
SOURCE # 25	40	20	62	0	0	0	1	
SOURCE # 26	40	20	62	0	0	0	1	
SOURCE # 27	40	20	62	0	0	0	1	
SOURCE # 28	40	20	62	0	0	0	1	
SOURCE # 29	40	20	62	0	0	0	1	
SOURCE # 30	54	41	67	0	0	0	2	
SOURCE # 31	39	20	62	0	0	0	1	
SOURCE # 32	39	20	62	0	0	0	1	
SOURCE # 33	39	20	62	0	0	0	1	
SOURCE # 34	39	20	62	0	0	0	1	
SOURCE # 35	39	20	62	0	0	0	1	
SOURCE # 36	39	20	62	0	0	0	1	
SOURCE # 37	53	40	68	0	0	0	2	
SOURCE # 38	56	36	57	0	0	0	0	
SOURCE # 39	56	36	57	0	0	0	0	
SOURCE # 40	55	36	57	0	0	0	0	
SOURCE # 41	53	33	59	0	0	0	0	
SOURCE # 42	53	33	60	0	0	0	0	
SOURCE # 43	53	33	60	0	0	0	0	
SOURCE # 44	46	27	65	0	0	0	0	
SOURCE # 45	46	27	65	0	0	0	0	
SOURCE # 46	46	27	65	0	0	0	0	
SOURCE # 47	51	31	62	0	0	0	0	
SOURCE # 48	51	31	61	0	0	0	0	
SOURCE # 49	51	31	61	0	0	0	0	
SOURCE # 50	39	20	62	0	0	0	1	
SOURCE # 51	39	20	62	0	0	0	1	
BACKGROUND	0	0						

HGMWC.TXT

TOTAL wo bkg 67 52
 TOTAL w bkg 67 52

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	2 Greg565	77248	35342	520	
SOURCE #	1 Primary Crusher	79767	41378	548	6540
SOURCE #	2 SAG Mill	80714	41311	556	6903
SOURCE #	3 Ball Mill	80812	41287	556	6932
SOURCE #	4 Regrind Mill 1	80996	41228	559	6978
SOURCE #	5 Regrind Mill 2	81013	41223	559	6983
SOURCE #	6 Regrind Mill 3	81031	41219	559	6989
SOURCE #	7 Regrind Mill 4	80991	41208	559	6958
SOURCE #	8 Regrind Mill 5	81008	41204	559	6964
SOURCE #	9 Regrind Mill 6	81026	41199	559	6969
SOURCE #	10 ROSAHT 1	71900	35000	680	5361
SOURCE #	11 ROSAHT 2	71850	34950	680	5414
SOURCE #	12 ROSAHT 3	71800	34900	680	5468
SOURCE #	13 ROSADZ 1	71750	34850	680	5522
SOURCE #	14 ROSADZ 2	71700	34800	680	5576
SOURCE #	15 ROSADZ 3	71650	34750	680	5631
SOURCE #	16 ROSA BUA	71910	35010	675	5350
SOURCE #	17 JPHT 1	78200	39000	680	3783
SOURCE #	18 JPHT 2	78150	38950	680	3722
SOURCE #	19 JPHT 3	78100	38900	680	3662
SOURCE #	20 JPDZ 1	78050	38850	680	3602
SOURCE #	21 JPDZ 2	78000	38800	680	3542
SOURCE #	22 JPDZ3	78210	39010	680	3795
SOURCE #	23 JPBU	78210	39010	680	3795
SOURCE #	24 HOSAHT 1	77400	43400	720	8061
SOURCE #	25 HOSAHT 2	77350	43350	720	8011
SOURCE #	26 HOSAHT 3	77300	43300	720	7960
SOURCE #	27 HOSADZ 1	77250	43250	720	7910
SOURCE #	28 HOSADZ 2	77200	43200	720	7860
SOURCE #	29 HOSADZ 3	77150	43150	720	7811
SOURCE #	30 HOSABU	77410	43410	720	8072
SOURCE #	31 JOSAHHT 1	80600	43700	630	9005
SOURCE #	32 JOSAHHT 2	80550	43650	630	8940
SOURCE #	33 JOSAHHT 3	80500	43600	630	8875
SOURCE #	34 JOSADZ 1	80450	43550	630	8811
SOURCE #	35 JOSADZ 2	80400	43500	630	8746
SOURCE #	36 JOSADZ 3	80350	43450	630	8681
SOURCE #	37 JOSABU	80610	43710	630	9018
SOURCE #	38 CPDRILL 1	75500	33700	460	2399
SOURCE #	39 CPDRILL 2	75450	33650	460	2469
SOURCE #	40 CPDRILL 3	75400	33600	460	2540
SOURCE #	41 SPDRILL 1	74000	34800	480	3293
SOURCE #	42 SPDRILL 2	73950	34750	480	3350
SOURCE #	43 SPDRILL 3	73900	34700	480	3409
SOURCE #	44 SKPDRILL 1	75600	42100	420	6956
SOURCE #	45 SKPDRILL 2	75550	42050	420	6920
SOURCE #	46 SKPDRILL 3	75500	42000	420	6884
SOURCE #	47 LPDRILL 1	76900	39600	440	4272
SOURCE #	48 LPDRILL 2	76850	39550	440	4227
SOURCE #	49 LPDRILL 3	76800	39500	440	4182
SOURCE #	50 TSFHT	85300	37500	620	8336
SOURCE #	51 TSFDZ	85250	37450	620	8275

PROJECTED OCTAVE LEVELS:		HGMWC.TXT							
OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	63	62	61	59	31	25	1	0	0
0									
A-wt	23	36	44	51	28	25	2	1	-2
-7									
□									

APPENDIX G

Soundcalc Output –Haile Gold Mine Property Boundary Results

H

STS&PropResults-L-Peak.TXT

SOURCE # 31	JOSAHT 1	80600	43700	630	11694
SOURCE # 32	JOSAHT 2	80550	43650	630	11723
SOURCE # 33	JOSAHT 3	80500	43600	630	11752
SOURCE # 34	JOSADZ 1	80450	43550	630	11782
SOURCE # 35	JOSADZ 2	80400	43500	630	11813
SOURCE # 36	JOSADZ 3	80350	43450	630	11843
SOURCE # 37	JOSABU	80610	43710	630	11688
SOURCE # 38	CPDRILL 1	75500	33700	460	17069
SOURCE # 39	CPDRILL 2	75450	33650	460	17133
SOURCE # 40	CPDRILL 3	75400	33600	460	17197
SOURCE # 41	SPDRILL 1	74000	34800	480	18167
SOURCE # 42	SPDRILL 2	73950	34750	480	18228
SOURCE # 43	SPDRILL 3	73900	34700	480	18289
SOURCE # 44	SKPDRILL 1	75600	42100	420	16137
SOURCE # 45	SKPDRILL 2	75550	42050	420	16178
SOURCE # 46	SKPDRILL 3	75500	42000	420	16220
SOURCE # 47	LPDRILL 1	76900	39600	440	14634
SOURCE # 48	LPDRILL 2	76850	39550	440	14684
SOURCE # 49	LPDRILL 3	76800	39500	440	14734
SOURCE # 50	TSFHT	85300	37500	620	6563
SOURCE # 51	TSFDZ	85250	37450	620	6626

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2k	4k	8000
16K									
LINEAR	56	52	49	48	17	5	0	0	0
0									
A-wt	16	25	33	40	13	5	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 11 - Prop-1 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	50	25	67	0	0	0	1
SOURCE # 2	51	26	66	0	0	0	1
SOURCE # 3	51	26	66	0	0	0	1
SOURCE # 4	44	20	59	0	0	0	0
SOURCE # 5	44	20	59	0	0	0	0
SOURCE # 6	44	20	59	0	0	0	0
SOURCE # 7	44	20	59	0	0	0	0
SOURCE # 8	44	20	59	0	0	0	0
SOURCE # 9	44	20	59	0	0	0	0
SOURCE # 10	33	19	63	0	0	0	3
SOURCE # 11	33	19	63	0	0	0	3
SOURCE # 12	33	19	63	0	0	0	3
SOURCE # 13	33	19	63	0	0	0	3
SOURCE # 14	33	19	63	0	0	0	3
SOURCE # 15	32	19	63	0	0	0	3
SOURCE # 16	46	31	74	0	0	0	5
SOURCE # 17	37	20	62	0	0	0	2
SOURCE # 18	37	20	62	0	0	0	2
SOURCE # 19	37	20	62	0	0	0	2
SOURCE # 20	37	20	62	0	0	0	2
SOURCE # 21	37	20	62	0	0	0	2
SOURCE # 22	37	20	62	0	0	0	2
SOURCE # 23	51	38	70	0	0	0	3
SOURCE # 24	37	20	62	0	0	0	2
SOURCE # 25	37	20	62	0	0	0	2
SOURCE # 26	37	20	62	0	0	0	2
SOURCE # 27	37	20	62	0	0	0	2

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SOURCE # 28	37	20	62	0	0	0	2
SOURCE # 29	37	20	62	0	0	0	2
SOURCE # 30	51	38	70	0	0	0	3
SOURCE # 31	40	20	62	0	0	0	1
SOURCE # 32	40	20	62	0	0	0	1
SOURCE # 33	40	20	62	0	0	0	1
SOURCE # 34	40	20	62	0	0	0	1
SOURCE # 35	40	20	62	0	0	0	1
SOURCE # 36	40	20	62	0	0	0	1
SOURCE # 37	55	42	67	0	0	0	2
SOURCE # 38	39	22	70	0	0	0	1
SOURCE # 39	39	22	70	0	0	0	1
SOURCE # 40	39	22	70	0	0	0	1
SOURCE # 41	39	22	70	0	0	0	1
SOURCE # 42	39	22	70	0	0	0	1
SOURCE # 43	39	22	70	0	0	0	1
SOURCE # 44	41	23	69	0	0	0	1
SOURCE # 45	41	23	69	0	0	0	1
SOURCE # 46	41	23	69	0	0	0	1
SOURCE # 47	42	24	69	0	0	0	1
SOURCE # 48	42	24	69	0	0	0	1
SOURCE # 49	42	24	69	0	0	0	1
SOURCE # 50	42	21	61	0	0	0	1
SOURCE # 51	42	21	61	0	0	0	1
BACKGROUND	0	0					

TOTAL wo bkg 61 45
TOTAL w bkg 61 45

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 11	Prop-1	87947	42931	568	
SOURCE # 1	Primary Crusher	79767	41378	548	8326
SOURCE # 2	SAG Mill	80714	41311	556	7411
SOURCE # 3	Ball Mill	80812	41287	556	7321
SOURCE # 4	Regrind Mill 1	80996	41228	559	7156
SOURCE # 5	Regrind Mill 2	81013	41223	559	7141
SOURCE # 6	Regrind Mill 3	81031	41219	559	7124
SOURCE # 7	Regrind Mill 4	80991	41208	559	7166
SOURCE # 8	Regrind Mill 5	81008	41204	559	7150
SOURCE # 9	Regrind Mill 6	81026	41199	559	7134
SOURCE # 10	ROSAHT 1	71900	35000	680	17900
SOURCE # 11	ROSAHT 2	71850	34950	680	17967
SOURCE # 12	ROSAHT 3	71800	34900	680	18034
SOURCE # 13	ROSADZ 1	71750	34850	680	18101
SOURCE # 14	ROSADZ 2	71700	34800	680	18168
SOURCE # 15	ROSADZ 3	71650	34750	680	18235
SOURCE # 16	ROSA BUA	71910	35010	675	17886
SOURCE # 17	JPHT 1	78200	39000	680	10510
SOURCE # 18	JPHT 2	78150	38950	680	10575
SOURCE # 19	JPHT 3	78100	38900	680	10640
SOURCE # 20	JPDZ 1	78050	38850	680	10705
SOURCE # 21	JPDZ 2	78000	38800	680	10771
SOURCE # 22	JPDZ3	78210	39010	680	10497
SOURCE # 23	JPBU	78210	39010	680	10497
SOURCE # 24	HOSAHT 1	77400	43400	720	10558
SOURCE # 25	HOSAHT 2	77350	43350	720	10606
SOURCE # 26	HOSAHT 3	77300	43300	720	10654
SOURCE # 27	HOSADZ 1	77250	43250	720	10702

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SOURCE # 28	HOSADZ 2	77200	43200	720	10751
SOURCE # 29	HOSADZ 3	77150	43150	720	10800
SOURCE # 30	HOSABU	77410	43410	720	10549
SOURCE # 31	JOSAHT 1	80600	43700	630	7387
SOURCE # 32	JOSAHT 2	80550	43650	630	7432
SOURCE # 33	JOSAHT 3	80500	43600	630	7477
SOURCE # 34	JOSADZ 1	80450	43550	630	7522
SOURCE # 35	JOSADZ 2	80400	43500	630	7568
SOURCE # 36	JOSADZ 3	80350	43450	630	7614
SOURCE # 37	JOSABU	80610	43710	630	7378
SOURCE # 38	CPDRILL 1	75500	33700	460	15496
SOURCE # 39	CPDRILL 2	75450	33650	460	15566
SOURCE # 40	CPDRILL 3	75400	33600	460	15636
SOURCE # 41	SPDRILL 1	74000	34800	480	16144
SOURCE # 42	SPDRILL 2	73950	34750	480	16212
SOURCE # 43	SPDRILL 3	73900	34700	480	16281
SOURCE # 44	SKPDRILL 1	75600	42100	420	12375
SOURCE # 45	SKPDRILL 2	75550	42050	420	12429
SOURCE # 46	SKPDRILL 3	75500	42000	420	12482
SOURCE # 47	LPDRILL 1	76900	39600	440	11539
SOURCE # 48	LPDRILL 2	76850	39550	440	11601
SOURCE # 49	LPDRILL 3	76800	39500	440	11663
SOURCE # 50	TSFHT	85300	37500	620	6041
SOURCE # 51	TSFDZ	85250	37450	620	6108

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2k	4k	8000
16K									
LINEAR	59	54	52	53	22	14	0	0	0
0									
A-wt	20	28	36	44	19	14	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 12 - Prop-2 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		SPHERE	DBA ATTENUATION FROM REF. DISTANCE			ATMOS.
	DB(Lin)	DBA		PATH	/1000 Ft	BARRIERS	
SOURCE # 1	55	30	63	0	0	0	1
SOURCE # 2	55	30	62	0	0	0	1
SOURCE # 3	55	30	62	0	0	0	1
SOURCE # 4	47	20	58	0	0	0	0
SOURCE # 5	47	20	58	0	0	0	0
SOURCE # 6	47	20	58	0	0	0	0
SOURCE # 7	47	20	58	0	0	0	0
SOURCE # 8	47	20	58	0	0	0	0
SOURCE # 9	47	20	58	0	0	0	0
SOURCE # 10	35	19	63	0	0	0	2
SOURCE # 11	35	19	63	0	0	0	2
SOURCE # 12	34	19	63	0	0	0	2
SOURCE # 13	34	19	63	0	0	0	2
SOURCE # 14	34	19	63	0	0	0	2
SOURCE # 15	34	19	63	0	0	0	2
SOURCE # 16	48	34	72	0	0	0	4
SOURCE # 17	40	20	62	0	0	0	1
SOURCE # 18	40	20	62	0	0	0	1
SOURCE # 19	40	20	62	0	0	0	1
SOURCE # 20	40	20	62	0	0	0	1
SOURCE # 21	40	20	62	0	0	0	1
SOURCE # 22	40	20	62	0	0	0	1
SOURCE # 23	54	42	67	0	0	0	2
SOURCE # 24	45	22	60	0	0	0	1

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SOURCE # 25	45	22	60	0	0	0	1
SOURCE # 26	45	22	60	0	0	0	1
SOURCE # 27	44	22	60	0	0	0	1
SOURCE # 28	44	22	60	0	0	0	1
SOURCE # 29	44	22	60	0	0	0	1
SOURCE # 30	60	47	62	0	0	0	1
SOURCE # 31	50	26	56	0	0	0	0
SOURCE # 32	50	26	56	0	0	0	0
SOURCE # 33	50	26	56	0	0	0	0
SOURCE # 34	50	25	56	0	0	0	0
SOURCE # 35	49	25	57	0	0	0	0
SOURCE # 36	49	25	57	0	0	0	0
SOURCE # 37	65	53	57	0	0	0	0
SOURCE # 38	40	23	70	0	0	0	1
SOURCE # 39	40	23	70	0	0	0	1
SOURCE # 40	40	23	70	0	0	0	1
SOURCE # 41	40	23	69	0	0	0	1
SOURCE # 42	40	23	69	0	0	0	1
SOURCE # 43	40	23	70	0	0	0	1
SOURCE # 44	47	28	65	0	0	0	0
SOURCE # 45	47	27	65	0	0	0	0
SOURCE # 46	47	27	65	0	0	0	0
SOURCE # 47	46	26	66	0	0	0	0
SOURCE # 48	45	26	66	0	0	0	0
SOURCE # 49	45	26	66	0	0	0	0
SOURCE # 50	38	20	62	0	0	0	1
SOURCE # 51	38	20	62	0	0	0	1
BACKGROUND	0	0					

□

TOTAL wo bkg	68	55
TOTAL w bkg	68	55

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 12	Prop-2	80923	46071	530	
SOURCE # 1	Primary Crusher	79767	41378	548	4833
SOURCE # 2	SAG Mill	80714	41311	556	4763
SOURCE # 3	Ball Mill	80812	41287	556	4784
SOURCE # 4	Regrind Mill 1	80996	41228	559	4843
SOURCE # 5	Regrind Mill 2	81013	41223	559	4848
SOURCE # 6	Regrind Mill 3	81031	41219	559	4853
SOURCE # 7	Regrind Mill 4	80991	41208	559	4863
SOURCE # 8	Regrind Mill 5	81008	41204	559	4867
SOURCE # 9	Regrind Mill 6	81026	41199	559	4873
SOURCE # 10	ROSAHT 1	71900	35000	680	14283
SOURCE # 11	ROSAHT 2	71850	34950	680	14353
SOURCE # 12	ROSAHT 3	71800	34900	680	14423
SOURCE # 13	ROSADZ 1	71750	34850	680	14494
SOURCE # 14	ROSADZ 2	71700	34800	680	14564
SOURCE # 15	ROSADZ 3	71650	34750	680	14634
SOURCE # 16	ROSA BUA	71910	35010	675	14268
SOURCE # 17	JPHT 1	78200	39000	680	7578
SOURCE # 18	JPHT 2	78150	38950	680	7643
SOURCE # 19	JPHT 3	78100	38900	680	7708
SOURCE # 20	JPDZ 1	78050	38850	680	7773
SOURCE # 21	JPDZ 2	78000	38800	680	7837
SOURCE # 22	JPDZ3	78210	39010	680	7565
SOURCE # 23	JPBU	78210	39010	680	7565
SOURCE # 24	HOSAHT 1	77400	43400	720	4425

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SOURCE # 25	HOSAHT 2	77350	43350	720	4495
SOURCE # 26	HOSAHT 3	77300	43300	720	4565
SOURCE # 27	HOSADZ 1	77250	43250	720	4635
SOURCE # 28	HOSADZ 2	77200	43200	720	4705
SOURCE # 29	HOSADZ 3	77150	43150	720	4775
SOURCE # 30	HOSABU	77410	43410	720	4411
SOURCE # 31	JOSAHT 1	80600	43700	630	2395
SOURCE # 32	JOSAHT 2	80550	43650	630	2451
SOURCE # 33	JOSAHT 3	80500	43600	630	2508
SOURCE # 34	JOSADZ 1	80450	43550	630	2566
SOURCE # 35	JOSADZ 2	80400	43500	630	2625
SOURCE # 36	JOSADZ 3	80350	43450	630	2684
SOURCE # 37	JOSABU	80610	43710	630	2383
SOURCE # 38	CPDRILL 1	75500	33700	460	13507
SOURCE # 39	CPDRILL 2	75450	33650	460	13573
SOURCE # 40	CPDRILL 3	75400	33600	460	13639
SOURCE # 41	SPDRILL 1	74000	34800	480	13227
SOURCE # 42	SPDRILL 2	73950	34750	480	13296
SOURCE # 43	SPDRILL 3	73900	34700	480	13365
SOURCE # 44	SKPDRILL 1	75600	42100	420	6641
SOURCE # 45	SKPDRILL 2	75550	42050	420	6711
SOURCE # 46	SKPDRILL 3	75500	42000	420	6781
SOURCE # 47	LPDRILL 1	76900	39600	440	7620
SOURCE # 48	LPDRILL 2	76850	39550	440	7689
SOURCE # 49	LPDRILL 3	76800	39500	440	7757
SOURCE # 50	TSFHT	85300	37500	620	9624
SOURCE # 51	TSFDZ	85250	37450	620	9646

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2k	4k	8000
16K									
LINEAR	65	60	60	63	33	29	0	0	0
0									
A-wt	26	33	44	54	30	29	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 13 - Prop-3 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	51	26	66	0	0	0	1
SOURCE # 2	50	25	67	0	0	0	1
SOURCE # 3	50	25	67	0	0	0	1
SOURCE # 4	42	19	59	0	0	0	0
SOURCE # 5	42	19	59	0	0	0	0
SOURCE # 6	42	19	59	0	0	0	0
SOURCE # 7	42	19	59	0	0	0	0
SOURCE # 8	42	19	59	0	0	0	0
SOURCE # 9	42	19	59	0	0	0	0
SOURCE # 10	44	22	60	0	0	0	1
SOURCE # 11	44	21	60	0	0	0	1
SOURCE # 12	43	21	60	0	0	0	1
SOURCE # 13	43	21	60	0	0	0	1
SOURCE # 14	43	21	60	0	0	0	1
SOURCE # 15	43	21	60	0	0	0	1
SOURCE # 16	58	46	63	0	0	0	1
SOURCE # 17	42	21	61	0	0	0	1
SOURCE # 18	42	21	61	0	0	0	1
SOURCE # 19	42	21	61	0	0	0	1
SOURCE # 20	43	21	61	0	0	0	1
SOURCE # 21	43	21	61	0	0	0	1

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SOURCE # 22	42	21	61	0	0	0	1
SOURCE # 23	57	44	65	0	0	0	1
SOURCE # 24	42	21	61	0	0	0	1
SOURCE # 25	42	21	61	0	0	0	1
SOURCE # 26	42	21	61	0	0	0	1
SOURCE # 27	43	21	61	0	0	0	1
SOURCE # 28	43	21	61	0	0	0	1
SOURCE # 29	43	21	61	0	0	0	1
SOURCE # 30	57	44	65	0	0	0	1
SOURCE # 31	39	20	62	0	0	0	1
SOURCE # 32	39	20	62	0	0	0	1
SOURCE # 33	39	20	62	0	0	0	1
SOURCE # 34	39	20	62	0	0	0	1
SOURCE # 35	39	20	62	0	0	0	1
SOURCE # 36	39	20	62	0	0	0	1
SOURCE # 37	53	40	68	0	0	0	2
SOURCE # 38	46	27	65	0	0	0	0
SOURCE # 39	46	27	65	0	0	0	0
SOURCE # 40	46	27	65	0	0	0	0
SOURCE # 41	49	29	63	0	0	0	0
SOURCE # 42	48	29	63	0	0	0	0
SOURCE # 43	48	29	64	0	0	0	0
SOURCE # 44	52	32	61	0	0	0	0
SOURCE # 45	52	32	60	0	0	0	0
SOURCE # 46	52	33	60	0	0	0	0
SOURCE # 47	50	31	62	0	0	0	0
SOURCE # 48	50	31	62	0	0	0	0
SOURCE # 49	50	31	62	0	0	0	0
SOURCE # 50	35	19	63	0	0	0	2
SOURCE # 51	35	19	63	0	0	0	2
BACKGROUND	0	0					

□

TOTAL wo bkg	66	51
TOTAL w bkg	66	51

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

RECEIVER #		X	Y	Z	DST
RECEIVER # 13	Prop-3	72467	40006	525	
SOURCE # 1	Primary Crusher	79767	41378	548	7427
SOURCE # 2	SAG Mill	80714	41311	556	8350
SOURCE # 3	Ball Mill	80812	41287	556	8443
SOURCE # 4	Regrind Mill 1	80996	41228	559	8616
SOURCE # 5	Regrind Mill 2	81013	41223	559	8632
SOURCE # 6	Regrind Mill 3	81031	41219	559	8649
SOURCE # 7	Regrind Mill 4	80991	41208	559	8608
SOURCE # 8	Regrind Mill 5	81008	41204	559	8624
SOURCE # 9	Regrind Mill 6	81026	41199	559	8641
SOURCE # 10	ROSAHT 1	71900	35000	680	5040
SOURCE # 11	ROSAHT 2	71850	34950	680	5095
SOURCE # 12	ROSAHT 3	71800	34900	680	5151
SOURCE # 13	ROSADZ 1	71750	34850	680	5207
SOURCE # 14	ROSADZ 2	71700	34800	680	5264
SOURCE # 15	ROSADZ 3	71650	34750	680	5321
SOURCE # 16	ROSA BUA	71910	35010	675	5029
SOURCE # 17	JPHT 1	78200	39000	680	5822
SOURCE # 18	JPHT 2	78150	38950	680	5782
SOURCE # 19	JPHT 3	78100	38900	680	5742
SOURCE # 20	JPDZ 1	78050	38850	680	5703
SOURCE # 21	JPDZ 2	78000	38800	680	5665

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SOURCE # 22	JPDZ3	78210	39010	680	5830
SOURCE # 23	JPBU	78210	39010	680	5830
SOURCE # 24	HOSAHT 1	77400	43400	720	5990
SOURCE # 25	HOSAHT 2	77350	43350	720	5921
SOURCE # 26	HOSAHT 3	77300	43300	720	5852
SOURCE # 27	HOSADZ 1	77250	43250	720	5782
SOURCE # 28	HOSADZ 2	77200	43200	720	5713
SOURCE # 29	HOSADZ 3	77150	43150	720	5643
SOURCE # 30	HOSABU	77410	43410	720	6004
SOURCE # 31	JOSAHT 1	80600	43700	630	8933
SOURCE # 32	JOSAHT 2	80550	43650	630	8867
SOURCE # 33	JOSAHT 3	80500	43600	630	8800
SOURCE # 34	JOSADZ 1	80450	43550	630	8734
SOURCE # 35	JOSADZ 2	80400	43500	630	8669
SOURCE # 36	JOSADZ 3	80350	43450	630	8603
SOURCE # 37	JOSABU	80610	43710	630	8946
SOURCE # 38	CPDRILL 1	75500	33700	460	6997
SOURCE # 39	CPDRILL 2	75450	33650	460	7021
SOURCE # 40	CPDRILL 3	75400	33600	460	7045
SOURCE # 41	SPDRILL 1	74000	34800	480	5427
SOURCE # 42	SPDRILL 2	73950	34750	480	5461
SOURCE # 43	SPDRILL 3	73900	34700	480	5496
SOURCE # 44	SKPDRILL 1	75600	42100	420	3769
SOURCE # 45	SKPDRILL 2	75550	42050	420	3700
SOURCE # 46	SKPDRILL 3	75500	42000	420	3631
SOURCE # 47	LPDRILL 1	76900	39600	440	4452
SOURCE # 48	LPDRILL 2	76850	39550	440	4407
SOURCE # 49	LPDRILL 3	76800	39500	440	4363
SOURCE # 50	TSFHT	85300	37500	620	13075
SOURCE # 51	TSFDZ	85250	37450	620	13036

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2k	4k	8000
16k									
LINEAR	62	60	59	58	29	22	0	0	0
0									
A-wt	22	34	42	50	25	22	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 14 - Prop-4 -

PROJECT - HGMWC

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1	46	23	70	0	0	0	2
SOURCE #	2	46	22	70	0	0	0	2
SOURCE #	3	46	22	70	0	0	0	2
SOURCE #	4	38	19	59	0	0	0	0
SOURCE #	5	38	19	59	0	0	0	0
SOURCE #	6	38	19	59	0	0	0	0
SOURCE #	7	38	19	59	0	0	0	0
SOURCE #	8	38	19	59	0	0	0	0
SOURCE #	9	38	19	59	0	0	0	0
SOURCE #	10	47	24	58	0	0	0	0
SOURCE #	11	47	24	58	0	0	0	0
SOURCE #	12	47	24	58	0	0	0	0
SOURCE #	13	48	24	58	0	0	0	0
SOURCE #	14	48	24	58	0	0	0	0
SOURCE #	15	48	24	58	0	0	0	0
SOURCE #	16	62	50	60	0	0	0	1
SOURCE #	17	37	20	62	0	0	0	2
SOURCE #	18	37	20	62	0	0	0	2

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SOURCE # 19	37	20	62	0	0	0	2
SOURCE # 20	37	20	62	0	0	0	2
SOURCE # 21	37	20	62	0	0	0	2
SOURCE # 22	37	20	62	0	0	0	2
SOURCE # 23	51	38	70	0	0	0	3
SOURCE # 24	36	20	63	0	0	0	2
SOURCE # 25	36	20	63	0	0	0	2
SOURCE # 26	36	20	63	0	0	0	2
SOURCE # 27	36	20	63	0	0	0	2
SOURCE # 28	36	20	62	0	0	0	2
SOURCE # 29	36	20	62	0	0	0	2
SOURCE # 30	50	36	71	0	0	0	3
SOURCE # 31	34	19	63	0	0	0	2
SOURCE # 32	34	19	63	0	0	0	2
SOURCE # 33	34	19	63	0	0	0	2
SOURCE # 34	34	19	63	0	0	0	2
SOURCE # 35	34	19	63	0	0	0	2
SOURCE # 36	34	19	63	0	0	0	2
SOURCE # 37	48	34	73	0	0	0	4
SOURCE # 38	46	27	65	0	0	0	0
SOURCE # 39	46	27	65	0	0	0	0
SOURCE # 40	46	27	65	0	0	0	0
SOURCE # 41	49	29	63	0	0	0	0
SOURCE # 42	49	29	63	0	0	0	0
SOURCE # 43	49	29	63	0	0	0	0
SOURCE # 44	43	24	68	0	0	0	1
SOURCE # 45	43	24	68	0	0	0	1
SOURCE # 46	43	25	68	0	0	0	1
SOURCE # 47	43	25	68	0	0	0	1
SOURCE # 48	43	25	68	0	0	0	1
SOURCE # 49	44	25	68	0	0	0	1
SOURCE # 50	33	19	63	0	0	0	3
SOURCE # 51	33	19	63	0	0	0	3
BACKGROUND	0	0					
TOTAL wo bkg	65	51					
TOTAL w bkg	65	51					
TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3	

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 14	Prop-4	68569	34761	500	
SOURCE # 1	Primary Crusher	79767	41378	548	13007
SOURCE # 2	SAG Mill	80714	41311	556	13799
SOURCE # 3	Ball Mill	80812	41287	556	13874
SOURCE # 4	Regrind Mill 1	80996	41228	559	14009
SOURCE # 5	Regrind Mill 2	81013	41223	559	14021
SOURCE # 6	Regrind Mill 3	81031	41219	559	14036
SOURCE # 7	Regrind Mill 4	80991	41208	559	13995
SOURCE # 8	Regrind Mill 5	81008	41204	559	14008
SOURCE # 9	Regrind Mill 6	81026	41199	559	14022
SOURCE # 10	ROSAHT 1	71900	35000	680	3344
SOURCE # 11	ROSAHT 2	71850	34950	680	3291
SOURCE # 12	ROSAHT 3	71800	34900	680	3239
SOURCE # 13	ROSADZ 1	71750	34850	680	3187
SOURCE # 14	ROSADZ 2	71700	34800	680	3136
SOURCE # 15	ROSADZ 3	71650	34750	680	3086
SOURCE # 16	ROSA BUA	71910	35010	675	3354
SOURCE # 17	JPHT 1	78200	39000	680	10524
SOURCE # 18	JPHT 2	78150	38950	680	10458

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SOURCE # 19	JPHT 3	78100	38900	680	10392
SOURCE # 20	JPDZ 1	78050	38850	680	10326
SOURCE # 21	JPDZ 2	78000	38800	680	10261
SOURCE # 22	JPDZ3	78210	39010	680	10537
SOURCE # 23	JPBU	78210	39010	680	10537
SOURCE # 24	HOSAHT 1	77400	43400	720	12355
SOURCE # 25	HOSAHT 2	77350	43350	720	12285
SOURCE # 26	HOSAHT 3	77300	43300	720	12214
SOURCE # 27	HOSADZ 1	77250	43250	720	12143
SOURCE # 28	HOSADZ 2	77200	43200	720	12073
SOURCE # 29	HOSADZ 3	77150	43150	720	12002
SOURCE # 30	HOSABU	77410	43410	720	12370
SOURCE # 31	JOSAHT 1	80600	43700	630	14988
SOURCE # 32	JOSAHT 2	80550	43650	630	14918
SOURCE # 33	JOSAHT 3	80500	43600	630	14849
SOURCE # 34	JOSADZ 1	80450	43550	630	14779
SOURCE # 35	JOSADZ 2	80400	43500	630	14709
SOURCE # 36	JOSADZ 3	80350	43450	630	14639
SOURCE # 37	JOSABU	80610	43710	630	15002
SOURCE # 38	CPDRILL 1	75500	33700	460	7011
SOURCE # 39	CPDRILL 2	75450	33650	460	6970
SOURCE # 40	CPDRILL 3	75400	33600	460	6929
SOURCE # 41	SPDRILL 1	74000	34800	480	5431
SOURCE # 42	SPDRILL 2	73950	34750	480	5381
SOURCE # 43	SPDRILL 3	73900	34700	480	5331
SOURCE # 44	SKPDRILL 1	75600	42100	420	10163
SOURCE # 45	SKPDRILL 2	75550	42050	420	10093
SOURCE # 46	SKPDRILL 3	75500	42000	420	10022
SOURCE # 47	LPDRILL 1	76900	39600	440	9634
SOURCE # 48	LPDRILL 2	76850	39550	440	9566
SOURCE # 49	LPDRILL 3	76800	39500	440	9497
SOURCE # 50	TSFHT	85300	37500	620	16954
SOURCE # 51	TSFDZ	85250	37450	620	16896

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2k	4k	8000
16K									
LINEAR	61	57	57	59	29	24	0	0	0
0									
A-wt	21	31	41	50	26	24	1	1	-2
-7									
0									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 15 - Prop-5 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	48	24	68	0	0	0	2
SOURCE # 2	47	23	69	0	0	0	2
SOURCE # 3	47	23	69	0	0	0	2
SOURCE # 4	40	19	59	0	0	0	0
SOURCE # 5	40	19	59	0	0	0	0
SOURCE # 6	40	19	59	0	0	0	0
SOURCE # 7	40	19	59	0	0	0	0
SOURCE # 8	40	19	59	0	0	0	0
SOURCE # 9	40	19	59	0	0	0	0
SOURCE # 10	53	28	53	0	0	0	0
SOURCE # 11	53	29	53	0	0	0	0
SOURCE # 12	53	29	53	0	0	0	0
SOURCE # 13	53	29	53	0	0	0	0
SOURCE # 14	53	29	53	0	0	0	0
SOURCE # 15	54	29	53	0	0	0	0

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SOURCE # 16	68	56	54	0	0	0	0
SOURCE # 17	40	20	62	0	0	0	1
SOURCE # 18	40	20	62	0	0	0	1
SOURCE # 19	40	20	62	0	0	0	1
SOURCE # 20	40	20	62	0	0	0	1
SOURCE # 21	40	20	62	0	0	0	1
SOURCE # 22	40	20	62	0	0	0	1
SOURCE # 23	54	41	67	0	0	0	2
SOURCE # 24	37	20	62	0	0	0	2
SOURCE # 25	37	20	62	0	0	0	2
SOURCE # 26	37	20	62	0	0	0	2
SOURCE # 27	37	20	62	0	0	0	2
SOURCE # 28	37	20	62	0	0	0	2
SOURCE # 29	37	20	62	0	0	0	2
SOURCE # 30	51	37	70	0	0	0	3
SOURCE # 31	35	19	63	0	0	0	2
SOURCE # 32	35	19	63	0	0	0	2
SOURCE # 33	36	19	63	0	0	0	2
SOURCE # 34	36	19	63	0	0	0	2
SOURCE # 35	36	19	63	0	0	0	2
SOURCE # 36	36	19	63	0	0	0	2
SOURCE # 37	49	35	71	0	0	0	3
SOURCE # 38	54	34	59	0	0	0	0
SOURCE # 39	54	34	58	0	0	0	0
SOURCE # 40	54	35	58	0	0	0	0
SOURCE # 41	57	38	55	0	0	0	0
SOURCE # 42	58	38	55	0	0	0	0
SOURCE # 43	58	38	55	0	0	0	0
SOURCE # 44	44	25	67	0	0	0	1
SOURCE # 45	44	25	67	0	0	0	1
SOURCE # 46	44	25	67	0	0	0	1
SOURCE # 47	46	27	66	0	0	0	0
SOURCE # 48	46	27	66	0	0	0	0
SOURCE # 49	46	27	66	0	0	0	0
SOURCE # 50	35	19	63	0	0	0	2
SOURCE # 51	35	19	63	0	0	0	2
BACKGROUND	0	0					

□

TOTAL wo bkg	71	57
TOTAL w bkg	71	57

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

RECEIVER #		X	Y	Z	DST
15	Prop-5	72538	33412	475	
1	Primary Crusher	79767	41378	548	10757
2	SAG Mill	80714	41311	556	11369
3	Ball Mill	80812	41287	556	11423
4	Regrind Mill 1	80996	41228	559	11516
5	Regrind Mill 2	81013	41223	559	11525
6	Regrind Mill 3	81031	41219	559	11536
7	Regrind Mill 4	80991	41208	559	11499
8	Regrind Mill 5	81008	41204	559	11509
9	Regrind Mill 6	81026	41199	559	11519
10	ROSAHT 1	71900	35000	680	1723
11	ROSAHT 2	71850	34950	680	1697
12	ROSAHT 3	71800	34900	680	1673
13	ROSADZ 1	71750	34850	680	1652
14	ROSADZ 2	71700	34800	680	1634
15	ROSADZ 3	71650	34750	680	1618

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SOURCE # 16	ROSA BUA	71910	35010	675	1728
SOURCE # 17	JPHT 1	78200	39000	680	7957
SOURCE # 18	JPHT 2	78150	38950	680	7887
SOURCE # 19	JPHT 3	78100	38900	680	7816
SOURCE # 20	JPDZ 1	78050	38850	680	7745
SOURCE # 21	JPDZ 2	78000	38800	680	7675
SOURCE # 22	JPDZ3	78210	39010	680	7971
SOURCE # 23	JPBU	78210	39010	680	7971
SOURCE # 24	HOSAHT 1	77400	43400	720	11111
SOURCE # 25	HOSAHT 2	77350	43350	720	11044
SOURCE # 26	HOSAHT 3	77300	43300	720	10977
SOURCE # 27	HOSADZ 1	77250	43250	720	10910
SOURCE # 28	HOSADZ 2	77200	43200	720	10844
SOURCE # 29	HOSADZ 3	77150	43150	720	10777
SOURCE # 30	HOSABU	77410	43410	720	11124
SOURCE # 31	JOSAHT 1	80600	43700	630	13071
SOURCE # 32	JOSAHT 2	80550	43650	630	13001
SOURCE # 33	JOSAHT 3	80500	43600	630	12931
SOURCE # 34	JOSADZ 1	80450	43550	630	12860
SOURCE # 35	JOSADZ 2	80400	43500	630	12790
SOURCE # 36	JOSADZ 3	80350	43450	630	12720
SOURCE # 37	JOSABU	80610	43710	630	13085
SOURCE # 38	CPDRILL 1	75500	33700	460	2976
SOURCE # 39	CPDRILL 2	75450	33650	460	2921
SOURCE # 40	CPDRILL 3	75400	33600	460	2868
SOURCE # 41	SPDRILL 1	74000	34800	480	2015
SOURCE # 42	SPDRILL 2	73950	34750	480	1945
SOURCE # 43	SPDRILL 3	73900	34700	480	1874
SOURCE # 44	SKPDRILL 1	75600	42100	420	9211
SOURCE # 45	SKPDRILL 2	75550	42050	420	9148
SOURCE # 46	SKPDRILL 3	75500	42000	420	9084
SOURCE # 47	LPDRILL 1	76900	39600	440	7570
SOURCE # 48	LPDRILL 2	76850	39550	440	7501
SOURCE # 49	LPDRILL 3	76800	39500	440	7431
SOURCE # 50	TSFHT	85300	37500	620	13401
SOURCE # 51	TSFDZ	85250	37450	620	13338

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	66	64	63	65	36	32	6	0	0
0									
A-wt	27	37	47	56	33	32	7	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 16 - Prop-6 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	46	23	70	0	0	0	2
SOURCE # 2	46	22	70	0	0	0	2
SOURCE # 3	46	22	70	0	0	0	2
SOURCE # 4	38	19	59	0	0	0	0
SOURCE # 5	38	19	59	0	0	0	0
SOURCE # 6	38	19	59	0	0	0	0
SOURCE # 7	38	19	59	0	0	0	0
SOURCE # 8	38	19	59	0	0	0	0
SOURCE # 9	38	19	59	0	0	0	0
SOURCE # 10	41	21	61	0	0	0	1
SOURCE # 11	41	21	61	0	0	0	1
SOURCE # 12	41	21	61	0	0	0	1

STS&PropResults-L-Peak.TXT

SOURCE # 13	41	21	61	0	0	0	1
SOURCE # 14	41	21	61	0	0	0	1
SOURCE # 15	41	21	61	0	0	0	1
SOURCE # 16	55	43	66	0	0	0	2
SOURCE # 17	37	20	62	0	0	0	2
SOURCE # 18	37	20	62	0	0	0	2
SOURCE # 19	38	20	62	0	0	0	2
SOURCE # 20	38	20	62	0	0	0	2
SOURCE # 21	38	20	62	0	0	0	2
SOURCE # 22	38	20	62	0	0	0	2
SOURCE # 23	52	38	69	0	0	0	3
SOURCE # 24	35	19	63	0	0	0	2
SOURCE # 25	35	19	63	0	0	0	2
SOURCE # 26	35	19	63	0	0	0	2
SOURCE # 27	35	19	63	0	0	0	2
SOURCE # 28	35	19	63	0	0	0	2
SOURCE # 29	35	19	63	0	0	0	2
SOURCE # 30	48	34	72	0	0	0	4
SOURCE # 31	34	19	63	0	0	0	2
SOURCE # 32	34	19	63	0	0	0	2
SOURCE # 33	34	19	63	0	0	0	2
SOURCE # 34	34	19	63	0	0	0	2
SOURCE # 35	34	19	63	0	0	0	2
SOURCE # 36	34	19	63	0	0	0	2
SOURCE # 37	47	33	73	0	0	0	4
SOURCE # 38	50	31	62	0	0	0	0
SOURCE # 39	50	31	62	0	0	0	0
SOURCE # 40	50	31	62	0	0	0	0
SOURCE # 41	48	29	64	0	0	0	0
SOURCE # 42	48	29	64	0	0	0	0
SOURCE # 43	48	29	64	0	0	0	0
SOURCE # 44	41	23	69	0	0	0	1
SOURCE # 45	41	23	69	0	0	0	1
SOURCE # 46	41	23	69	0	0	0	1
SOURCE # 47	43	24	68	0	0	0	1
SOURCE # 48	43	24	68	0	0	0	1
SOURCE # 49	43	24	68	0	0	0	1
SOURCE # 50	36	19	63	0	0	0	2
SOURCE # 51	36	19	63	0	0	0	2
BACKGROUND	0	0					

□

TOTAL wo bkg	62	46
TOTAL w bkg	62	46

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

RECEIVER #		X	Y	Z	DST
16	Prop-6	75403	29145	500	
1	Primary Crusher	79767	41378	548	12988
2	SAG Mill	80714	41311	556	13275
3	Ball Mill	80812	41287	556	13293
4	Regrind Mill 1	80996	41228	559	13314
5	Regrind Mill 2	81013	41223	559	13317
6	Regrind Mill 3	81031	41219	559	13321
7	Regrind Mill 4	80991	41208	559	13294
8	Regrind Mill 5	81008	41204	559	13298
9	Regrind Mill 6	81026	41199	559	13301
10	ROSAHT 1	71900	35000	680	6825
11	ROSAHT 2	71850	34950	680	6808
12	ROSAHT 3	71800	34900	680	6792

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SOURCE # 13	ROSADZ 1	71750	34850	680	6776
SOURCE # 14	ROSADZ 2	71700	34800	680	6761
SOURCE # 15	ROSADZ 3	71650	34750	680	6747
SOURCE # 16	ROSA BUA	71910	35010	675	6828
SOURCE # 17	JPHT 1	78200	39000	680	10245
SOURCE # 18	JPHT 2	78150	38950	680	10184
SOURCE # 19	JPHT 3	78100	38900	680	10122
SOURCE # 20	JPDZ 1	78050	38850	680	10061
SOURCE # 21	JPDZ 2	78000	38800	680	9999
SOURCE # 22	JPDZ3	78210	39010	680	10258
SOURCE # 23	JPBU	78210	39010	680	10258
SOURCE # 24	HOSAHT 1	77400	43400	720	14395
SOURCE # 25	HOSAHT 2	77350	43350	720	14339
SOURCE # 26	HOSAHT 3	77300	43300	720	14283
SOURCE # 27	HOSADZ 1	77250	43250	720	14227
SOURCE # 28	HOSADZ 2	77200	43200	720	14171
SOURCE # 29	HOSADZ 3	77150	43150	720	14115
SOURCE # 30	HOSABU	77410	43410	720	14407
SOURCE # 31	JOSAHT 1	80600	43700	630	15455
SOURCE # 32	JOSAHT 2	80550	43650	630	15391
SOURCE # 33	JOSAHT 3	80500	43600	630	15327
SOURCE # 34	JOSADZ 1	80450	43550	630	15264
SOURCE # 35	JOSADZ 2	80400	43500	630	15200
SOURCE # 36	JOSADZ 3	80350	43450	630	15136
SOURCE # 37	JOSABU	80610	43710	630	15468
SOURCE # 38	CPDRILL 1	75500	33700	460	4556
SOURCE # 39	CPDRILL 2	75450	33650	460	4505
SOURCE # 40	CPDRILL 3	75400	33600	460	4455
SOURCE # 41	SPDRILL 1	74000	34800	480	5826
SOURCE # 42	SPDRILL 2	73950	34750	480	5790
SOURCE # 43	SPDRILL 3	73900	34700	480	5754
SOURCE # 44	SKPDRILL 1	75600	42100	420	12956
SOURCE # 45	SKPDRILL 2	75550	42050	420	12906
SOURCE # 46	SKPDRILL 3	75500	42000	420	12855
SOURCE # 47	LPDRILL 1	76900	39600	440	10561
SOURCE # 48	LPDRILL 2	76850	39550	440	10505
SOURCE # 49	LPDRILL 3	76800	39500	440	10448
SOURCE # 50	TSFHT	85300	37500	620	12952
SOURCE # 51	TSFDZ	85250	37450	620	12882

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	57	57	55	53	23	15	0	0	0
0									
A-wt	18	30	39	44	20	15	1	1	-2
-7									
0									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 17 - Prop-7 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				BARRIERS	ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft			
SOURCE # 1	56	31	62	0	0		0	1
SOURCE # 2	56	31	62	0	0		0	1
SOURCE # 3	56	31	62	0	0		0	1
SOURCE # 4	48	21	57	0	0		0	0
SOURCE # 5	48	21	57	0	0		0	0
SOURCE # 6	48	21	57	0	0		0	0
SOURCE # 7	48	21	57	0	0		0	0
SOURCE # 8	48	21	57	0	0		0	0
SOURCE # 9	48	21	57	0	0		0	0

STS&PropResults-L-Peak.TXT

SOURCE # 10	39	20	62	0	0	0	1
SOURCE # 11	39	20	62	0	0	0	1
SOURCE # 12	39	20	62	0	0	0	1
SOURCE # 13	39	20	62	0	0	0	1
SOURCE # 14	39	20	62	0	0	0	1
SOURCE # 15	39	20	62	0	0	0	1
SOURCE # 16	53	40	68	0	0	0	2
SOURCE # 17	48	25	57	0	0	0	0
SOURCE # 18	48	24	57	0	0	0	0
SOURCE # 19	48	24	57	0	0	0	0
SOURCE # 20	48	24	57	0	0	0	0
SOURCE # 21	48	24	57	0	0	0	0
SOURCE # 22	48	25	57	0	0	0	0
SOURCE # 23	63	51	59	0	0	0	0
SOURCE # 24	41	20	61	0	0	0	1
SOURCE # 25	41	20	61	0	0	0	1
SOURCE # 26	41	20	61	0	0	0	1
SOURCE # 27	41	20	61	0	0	0	1
SOURCE # 28	41	20	61	0	0	0	1
SOURCE # 29	41	21	61	0	0	0	1
SOURCE # 30	55	42	66	0	0	0	2
SOURCE # 31	41	21	61	0	0	0	1
SOURCE # 32	41	21	61	0	0	0	1
SOURCE # 33	41	21	61	0	0	0	1
SOURCE # 34	42	21	61	0	0	0	1
SOURCE # 35	42	21	61	0	0	0	1
SOURCE # 36	42	21	61	0	0	0	1
SOURCE # 37	56	43	66	0	0	0	2
SOURCE # 38	48	28	64	0	0	0	0
SOURCE # 39	48	28	64	0	0	0	0
SOURCE # 40	48	28	64	0	0	0	0
SOURCE # 41	47	27	65	0	0	0	0
SOURCE # 42	47	27	65	0	0	0	0
SOURCE # 43	46	27	65	0	0	0	0
SOURCE # 44	46	27	65	0	0	0	0
SOURCE # 45	46	27	65	0	0	0	0
SOURCE # 46	46	27	65	0	0	0	0
SOURCE # 47	51	31	62	0	0	0	0
SOURCE # 48	51	31	62	0	0	0	0
SOURCE # 49	51	31	62	0	0	0	0
SOURCE # 50	44	22	60	0	0	0	1
SOURCE # 51	44	22	60	0	0	0	1
BACKGROUND	0	0					

□

TOTAL wo bkg	68	53
TOTAL w bkg	68	53

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 17	Prop-7	80365	37050	500	
SOURCE # 1	Primary Crusher	79767	41378	548	4369
SOURCE # 2	SAG Mill	80714	41311	556	4276
SOURCE # 3	Ball Mill	80812	41287	556	4261
SOURCE # 4	Regrind Mill 1	80996	41228	559	4225
SOURCE # 5	Regrind Mill 2	81013	41223	559	4223
SOURCE # 6	Regrind Mill 3	81031	41219	559	4222
SOURCE # 7	Regrind Mill 4	80991	41208	559	4205
SOURCE # 8	Regrind Mill 5	81008	41204	559	4203
SOURCE # 9	Regrind Mill 6	81026	41199	559	4201

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SOURCE # 10	ROSAHT 1	71900	35000	680	8711
SOURCE # 11	ROSAHT 2	71850	34950	680	8771
SOURCE # 12	ROSAHT 3	71800	34900	680	8832
SOURCE # 13	ROSADZ 1	71750	34850	680	8893
SOURCE # 14	ROSADZ 2	71700	34800	680	8954
SOURCE # 15	ROSADZ 3	71650	34750	680	9015
SOURCE # 16	ROSA BUA	71910	35010	675	8699
SOURCE # 17	JPHT 1	78200	39000	680	2919
SOURCE # 18	JPHT 2	78150	38950	680	2923
SOURCE # 19	JPHT 3	78100	38900	680	2930
SOURCE # 20	JPDZ 1	78050	38850	680	2937
SOURCE # 21	JPDZ 2	78000	38800	680	2947
SOURCE # 22	JPDZ3	78210	39010	680	2918
SOURCE # 23	JPBU	78210	39010	680	2918
SOURCE # 24	HOSAHT 1	77400	43400	720	7011
SOURCE # 25	HOSAHT 2	77350	43350	720	6987
SOURCE # 26	HOSAHT 3	77300	43300	720	6964
SOURCE # 27	HOSADZ 1	77250	43250	720	6942
SOURCE # 28	HOSADZ 2	77200	43200	720	6920
SOURCE # 29	HOSADZ 3	77150	43150	720	6898
SOURCE # 30	HOSABU	77410	43410	720	7016
SOURCE # 31	JOSAHT 1	80600	43700	630	6655
SOURCE # 32	JOSAHT 2	80550	43650	630	6603
SOURCE # 33	JOSAHT 3	80500	43600	630	6552
SOURCE # 34	JOSADZ 1	80450	43550	630	6501
SOURCE # 35	JOSADZ 2	80400	43500	630	6451
SOURCE # 36	JOSADZ 3	80350	43450	630	6401
SOURCE # 37	JOSABU	80610	43710	630	6665
SOURCE # 38	CPDRILL 1	75500	33700	460	5906
SOURCE # 39	CPDRILL 2	75450	33650	460	5976
SOURCE # 40	CPDRILL 3	75400	33600	460	6046
SOURCE # 41	SPDRILL 1	74000	34800	480	6751
SOURCE # 42	SPDRILL 2	73950	34750	480	6814
SOURCE # 43	SPDRILL 3	73900	34700	480	6878
SOURCE # 44	SKPDRILL 1	75600	42100	420	6943
SOURCE # 45	SKPDRILL 2	75550	42050	420	6941
SOURCE # 46	SKPDRILL 3	75500	42000	420	6940
SOURCE # 47	LPDRILL 1	76900	39600	440	4302
SOURCE # 48	LPDRILL 2	76850	39550	440	4313
SOURCE # 49	LPDRILL 3	76800	39500	440	4326
SOURCE # 50	TSFHT	85300	37500	620	4956
SOURCE # 51	TSFDZ	85250	37450	620	4902

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	65	61	59	61	32	27	0	0	0
0									
A-wt	25	34	43	52	29	27	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 18 - Prop-8 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	46	22	70	0	0	0	2
SOURCE # 2	46	23	70	0	0	0	2
SOURCE # 3	46	23	70	0	0	0	2
SOURCE # 4	39	19	59	0	0	0	0
SOURCE # 5	39	19	59	0	0	0	0
SOURCE # 6	39	19	59	0	0	0	0

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SOURCE # 7	39	19	59	0	0	0	0
SOURCE # 8	39	19	59	0	0	0	0
SOURCE # 9	39	19	59	0	0	0	0
SOURCE # 10	33	19	63	0	0	0	2
SOURCE # 11	33	19	63	0	0	0	2
SOURCE # 12	33	19	63	0	0	0	2
SOURCE # 13	33	19	63	0	0	0	2
SOURCE # 14	33	19	63	0	0	0	2
SOURCE # 15	33	19	63	0	0	0	3
SOURCE # 16	47	32	73	0	0	0	4
SOURCE # 17	35	19	62	0	0	0	2
SOURCE # 18	35	19	62	0	0	0	2
SOURCE # 19	35	19	62	0	0	0	2
SOURCE # 20	35	19	62	0	0	0	2
SOURCE # 21	35	19	62	0	0	0	2
SOURCE # 22	36	19	63	0	0	0	2
SOURCE # 23	49	35	71	0	0	0	3
SOURCE # 24	33	19	63	0	0	0	3
SOURCE # 25	33	19	63	0	0	0	2
SOURCE # 26	33	19	63	0	0	0	2
SOURCE # 27	33	19	63	0	0	0	2
SOURCE # 28	33	19	63	0	0	0	2
SOURCE # 29	33	19	63	0	0	0	2
SOURCE # 30	47	32	74	0	0	0	4
SOURCE # 31	34	19	63	0	0	0	2
SOURCE # 32	34	19	63	0	0	0	2
SOURCE # 33	34	19	63	0	0	0	2
SOURCE # 34	34	19	63	0	0	0	2
SOURCE # 35	34	19	63	0	0	0	2
SOURCE # 36	34	19	63	0	0	0	2
SOURCE # 37	48	33	73	0	0	0	4
SOURCE # 38	41	23	69	0	0	0	1
SOURCE # 39	41	23	69	0	0	0	1
SOURCE # 40	41	23	69	0	0	0	1
SOURCE # 41	40	22	70	0	0	0	1
SOURCE # 42	40	22	70	0	0	0	1
SOURCE # 43	40	22	70	0	0	0	1
SOURCE # 44	38	22	71	0	0	0	1
SOURCE # 45	38	22	71	0	0	0	1
SOURCE # 46	38	22	71	0	0	0	1
SOURCE # 47	40	23	70	0	0	0	1
SOURCE # 48	40	22	70	0	0	0	1
SOURCE # 49	40	22	70	0	0	0	1
SOURCE # 50	40	20	62	0	0	0	1
SOURCE # 51	40	20	62	0	0	0	1
BACKGROUND	0	0					

□

TOTAL wo bkg	58	42
TOTAL w bkg	58	42

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

RECEIVER #		X	Y	Z	DST
18	Prop-8	87710	30317	525	
1	Primary Crusher	79767	41378	548	13617
2	SAG Mill	80714	41311	556	13031
3	Ball Mill	80812	41287	556	12958
4	Regrind Mill 1	80996	41228	559	12811
5	Regrind Mill 2	81013	41223	559	12798
6	Regrind Mill 3	81031	41219	559	12785

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SOURCE # 7	Regrind Mill 4	80991	41208	559	12796
SOURCE # 8	Regrind Mill 5	81008	41204	559	12784
SOURCE # 9	Regrind Mill 6	81026	41199	559	12770
SOURCE # 10	ROSAHT 1	71900	35000	680	16489
SOURCE # 11	ROSAHT 2	71850	34950	680	16523
SOURCE # 12	ROSAHT 3	71800	34900	680	16557
SOURCE # 13	ROSADZ 1	71750	34850	680	16592
SOURCE # 14	ROSADZ 2	71700	34800	680	16626
SOURCE # 15	ROSADZ 3	71650	34750	680	16661
SOURCE # 16	ROSA BUA	71910	35010	675	16482
SOURCE # 17	JPHT 1	78200	39000	680	12878
SOURCE # 18	JPHT 2	78150	38950	680	12882
SOURCE # 19	JPHT 3	78100	38900	680	12885
SOURCE # 20	JPDZ 1	78050	38850	680	12890
SOURCE # 21	JPDZ 2	78000	38800	680	12894
SOURCE # 22	JPDZ3	78210	39010	680	12878
SOURCE # 23	JPBU	78210	39010	680	12878
SOURCE # 24	HOSAHT 1	77400	43400	720	16658
SOURCE # 25	HOSAHT 2	77350	43350	720	16650
SOURCE # 26	HOSAHT 3	77300	43300	720	16642
SOURCE # 27	HOSADZ 1	77250	43250	720	16634
SOURCE # 28	HOSADZ 2	77200	43200	720	16627
SOURCE # 29	HOSADZ 3	77150	43150	720	16620
SOURCE # 30	HOSABU	77410	43410	720	16660
SOURCE # 31	JOSAHT 1	80600	43700	630	15154
SOURCE # 32	JOSAHT 2	80550	43650	630	15134
SOURCE # 33	JOSAHT 3	80500	43600	630	15114
SOURCE # 34	JOSADZ 1	80450	43550	630	15094
SOURCE # 35	JOSADZ 2	80400	43500	630	15074
SOURCE # 36	JOSADZ 3	80350	43450	630	15055
SOURCE # 37	JOSABU	80610	43710	630	15158
SOURCE # 38	CPDRILL 1	75500	33700	460	12670
SOURCE # 39	CPDRILL 2	75450	33650	460	12705
SOURCE # 40	CPDRILL 3	75400	33600	460	12740
SOURCE # 41	SPDRILL 1	74000	34800	480	14424
SOURCE # 42	SPDRILL 2	73950	34750	480	14456
SOURCE # 43	SPDRILL 3	73900	34700	480	14488
SOURCE # 44	SKPDRILL 1	75600	42100	420	16896
SOURCE # 45	SKPDRILL 2	75550	42050	420	16897
SOURCE # 46	SKPDRILL 3	75500	42000	420	16899
SOURCE # 47	LPDRILL 1	76900	39600	440	14249
SOURCE # 48	LPDRILL 2	76850	39550	440	14254
SOURCE # 49	LPDRILL 3	76800	39500	440	14260
SOURCE # 50	TSFHT	85300	37500	620	7577
SOURCE # 51	TSFDZ	85250	37450	620	7545

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	55	51	49	48	15	3	0	0	0
0									
A-wt	16	25	33	39	12	3	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 19 - Prop-9 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	46	23	70	0	0	0	2
SOURCE # 2	47	23	69	0	0	0	2
SOURCE # 3	47	23	69	0	0	0	2

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SOURCE # 4	39	19	59	0	0	0	0
SOURCE # 5	39	19	59	0	0	0	0
SOURCE # 6	39	19	59	0	0	0	0
SOURCE # 7	39	19	59	0	0	0	0
SOURCE # 8	39	19	59	0	0	0	0
SOURCE # 9	39	19	59	0	0	0	0
SOURCE # 10	32	19	63	0	0	0	3
SOURCE # 11	32	19	63	0	0	0	3
SOURCE # 12	32	19	63	0	0	0	3
SOURCE # 13	32	19	63	0	0	0	3
SOURCE # 14	32	19	63	0	0	0	3
SOURCE # 15	32	19	63	0	0	0	3
SOURCE # 16	46	31	74	0	0	0	5
SOURCE # 17	35	19	63	0	0	0	2
SOURCE # 18	35	19	63	0	0	0	2
SOURCE # 19	35	19	63	0	0	0	2
SOURCE # 20	35	19	63	0	0	0	2
SOURCE # 21	35	19	63	0	0	0	2
SOURCE # 22	35	19	63	0	0	0	2
SOURCE # 23	49	35	72	0	0	0	3
SOURCE # 24	34	19	63	0	0	0	2
SOURCE # 25	34	19	63	0	0	0	2
SOURCE # 26	34	19	63	0	0	0	2
SOURCE # 27	34	19	63	0	0	0	2
SOURCE # 28	34	19	63	0	0	0	2
SOURCE # 29	34	19	63	0	0	0	2
SOURCE # 30	47	33	73	0	0	0	4
SOURCE # 31	35	19	63	0	0	0	2
SOURCE # 32	35	19	63	0	0	0	2
SOURCE # 33	35	19	63	0	0	0	2
SOURCE # 34	35	19	63	0	0	0	2
SOURCE # 35	35	19	63	0	0	0	2
SOURCE # 36	35	19	63	0	0	0	2
SOURCE # 37	48	34	72	0	0	0	4
SOURCE # 38	40	22	70	0	0	0	1
SOURCE # 39	39	22	70	0	0	0	1
SOURCE # 40	39	22	70	0	0	0	1
SOURCE # 41	39	22	70	0	0	0	1
SOURCE # 42	39	22	70	0	0	0	1
SOURCE # 43	39	22	70	0	0	0	1
SOURCE # 44	38	22	71	0	0	0	1
SOURCE # 45	38	22	71	0	0	0	1
SOURCE # 46	38	22	71	0	0	0	1
SOURCE # 47	40	22	70	0	0	0	1
SOURCE # 48	40	22	70	0	0	0	1
SOURCE # 49	40	22	70	0	0	0	1
SOURCE # 50	42	21	61	0	0	0	1
SOURCE # 51	42	21	61	0	0	0	1
BACKGROUND	0	0					
□							
TOTAL wo bkg	58	42					
TOTAL w bkg	58	42					
TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3							

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 19	Prop-9	90181	33532	525	
SOURCE # 1	Primary Crusher	79767	41378	548	13038
SOURCE # 2	SAG Mill	80714	41311	556	12253
SOURCE # 3	Ball Mill	80812	41287	556	12162

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SOURCE # 4	Regrind Mill 1	80996	41228	559	11983
SOURCE # 5	Regrind Mill 2	81013	41223	559	11966
SOURCE # 6	Regrind Mill 3	81031	41219	559	11950
SOURCE # 7	Regrind Mill 4	80991	41208	559	11974
SOURCE # 8	Regrind Mill 5	81008	41204	559	11958
SOURCE # 9	Regrind Mill 6	81026	41199	559	11941
SOURCE # 10	ROSAHT 1	71900	35000	680	18340
SOURCE # 11	ROSAHT 2	71850	34950	680	18386
SOURCE # 12	ROSAHT 3	71800	34900	680	18432
SOURCE # 13	ROSADZ 1	71750	34850	680	18478
SOURCE # 14	ROSADZ 2	71700	34800	680	18525
SOURCE # 15	ROSADZ 3	71650	34750	680	18571
SOURCE # 16	ROSA BUA	71910	35010	675	18331
SOURCE # 17	JPHT 1	78200	39000	680	13170
SOURCE # 18	JPHT 2	78150	38950	680	13195
SOURCE # 19	JPHT 3	78100	38900	680	13220
SOURCE # 20	JPDZ 1	78050	38850	680	13246
SOURCE # 21	JPDZ 2	78000	38800	680	13272
SOURCE # 22	JPDZ3	78210	39010	680	13165
SOURCE # 23	JPBU	78210	39010	680	13165
SOURCE # 24	HOSAHT 1	77400	43400	720	16148
SOURCE # 25	HOSAHT 2	77350	43350	720	16157
SOURCE # 26	HOSAHT 3	77300	43300	720	16167
SOURCE # 27	HOSADZ 1	77250	43250	720	16176
SOURCE # 28	HOSADZ 2	77200	43200	720	16186
SOURCE # 29	HOSADZ 3	77150	43150	720	16197
SOURCE # 30	HOSABU	77410	43410	720	16146
SOURCE # 31	JOSAHT 1	80600	43700	630	13971
SOURCE # 32	JOSAHT 2	80550	43650	630	13969
SOURCE # 33	JOSAHT 3	80500	43600	630	13967
SOURCE # 34	JOSADZ 1	80450	43550	630	13966
SOURCE # 35	JOSADZ 2	80400	43500	630	13965
SOURCE # 36	JOSADZ 3	80350	43450	630	13965
SOURCE # 37	JOSABU	80610	43710	630	13971
SOURCE # 38	CPDRILL 1	75500	33700	460	14682
SOURCE # 39	CPDRILL 2	75450	33650	460	14731
SOURCE # 40	CPDRILL 3	75400	33600	460	14781
SOURCE # 41	SPDRILL 1	74000	34800	480	16230
SOURCE # 42	SPDRILL 2	73950	34750	480	16276
SOURCE # 43	SPDRILL 3	73900	34700	480	16322
SOURCE # 44	SKPDRILL 1	75600	42100	420	16912
SOURCE # 45	SKPDRILL 2	75550	42050	420	16930
SOURCE # 46	SKPDRILL 3	75500	42000	420	16948
SOURCE # 47	LPDRILL 1	76900	39600	440	14601
SOURCE # 48	LPDRILL 2	76850	39550	440	14626
SOURCE # 49	LPDRILL 3	76800	39500	440	14651
SOURCE # 50	TSFHT	85300	37500	620	6291
SOURCE # 51	TSFDZ	85250	37450	620	6298

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	55	51	49	48	16	3	0	0	0
0									
A-wt	16	25	33	39	12	3	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 20 - Prop-10 -

PROJECT - HGMWC

CONTRIBUTOR	SPL DB(Lin) DBA	DBA ATTENUATION FROM REF. DISTANCE SPHERE PATH /1000 Ft BARRIERS	ATMOS.
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STS&PropResults-L-Peak.TXT

SOURCE #	1	54	29	63	0	0	0	1
SOURCE #	2	56	31	62	0	0	0	1
SOURCE #	3	56	31	61	0	0	0	0
SOURCE #	4	49	21	57	0	0	0	0
SOURCE #	5	49	21	57	0	0	0	0
SOURCE #	6	49	21	57	0	0	0	0
SOURCE #	7	49	21	57	0	0	0	0
SOURCE #	8	49	21	57	0	0	0	0
SOURCE #	9	49	21	57	0	0	0	0
SOURCE #	10	34	19	63	0	0	0	2
SOURCE #	11	34	19	63	0	0	0	2
SOURCE #	12	34	19	63	0	0	0	2
SOURCE #	13	34	19	63	0	0	0	2
SOURCE #	14	34	19	63	0	0	0	2
SOURCE #	15	34	19	63	0	0	0	2
SOURCE #	16	48	34	72	0	0	0	4
SOURCE #	17	40	20	61	0	0	0	1
SOURCE #	18	40	20	61	0	0	0	1
SOURCE #	19	40	20	62	0	0	0	1
SOURCE #	20	40	20	62	0	0	0	1
SOURCE #	21	40	20	62	0	0	0	1
SOURCE #	22	40	20	62	0	0	0	1
SOURCE #	23	55	42	66	0	0	0	2
SOURCE #	24	40	20	62	0	0	0	1
SOURCE #	25	40	20	62	0	0	0	1
SOURCE #	26	40	20	62	0	0	0	1
SOURCE #	27	40	20	62	0	0	0	1
SOURCE #	28	40	20	62	0	0	0	1
SOURCE #	29	40	20	62	0	0	0	1
SOURCE #	30	54	41	67	0	0	0	2
SOURCE #	31	44	22	60	0	0	0	1
SOURCE #	32	44	22	60	0	0	0	1
SOURCE #	33	44	22	60	0	0	0	1
SOURCE #	34	44	22	60	0	0	0	1
SOURCE #	35	44	22	60	0	0	0	1
SOURCE #	36	44	22	60	0	0	0	1
SOURCE #	37	59	46	63	0	0	0	1
SOURCE #	38	41	23	69	0	0	0	1
SOURCE #	39	41	23	69	0	0	0	1
SOURCE #	40	41	23	69	0	0	0	1
SOURCE #	41	41	23	69	0	0	0	1
SOURCE #	42	41	23	69	0	0	0	1
SOURCE #	43	41	23	69	0	0	0	1
SOURCE #	44	44	25	67	0	0	0	1
SOURCE #	45	44	25	67	0	0	0	1
SOURCE #	46	44	25	67	0	0	0	1
SOURCE #	47	45	26	67	0	0	0	0
SOURCE #	48	45	26	67	0	0	0	0
SOURCE #	49	45	26	67	0	0	0	0
SOURCE #	50	45	22	60	0	0	0	0
SOURCE #	51	45	22	60	0	0	0	1
BACKGROUND		0	0					
TOTAL wo bkg	65	49						
TOTAL w bkg	65	49						

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

RECEIVER #	Prop-10	X	Y	Z	DST
20	Prop-10	84972	41819	550	

STS&PropResults-L-Peak.TXT

SOURCE # 1	Primary Crusher	79767	41378	548	5223
SOURCE # 2	SAG Mill	80714	41311	556	4287
SOURCE # 3	Ball Mill	80812	41287	556	4193
SOURCE # 4	Regrind Mill 1	80996	41228	559	4019
SOURCE # 5	Regrind Mill 2	81013	41223	559	4003
SOURCE # 6	Regrind Mill 3	81031	41219	559	3986
SOURCE # 7	Regrind Mill 4	80991	41208	559	4027
SOURCE # 8	Regrind Mill 5	81008	41204	559	4011
SOURCE # 9	Regrind Mill 6	81026	41199	559	3994
SOURCE # 10	ROSAHT 1	71900	35000	680	14744
SOURCE # 11	ROSAHT 2	71850	34950	680	14811
SOURCE # 12	ROSAHT 3	71800	34900	680	14879
SOURCE # 13	ROSADZ 1	71750	34850	680	14946
SOURCE # 14	ROSADZ 2	71700	34800	680	15014
SOURCE # 15	ROSADZ 3	71650	34750	680	15081
SOURCE # 16	ROSA BUA	71910	35010	675	14730
SOURCE # 17	JPHT 1	78200	39000	680	7336
SOURCE # 18	JPHT 2	78150	38950	680	7401
SOURCE # 19	JPHT 3	78100	38900	680	7467
SOURCE # 20	JPDZ 1	78050	38850	680	7533
SOURCE # 21	JPDZ 2	78000	38800	680	7598
SOURCE # 22	JPDZ3	78210	39010	680	7323
SOURCE # 23	JPBU	78210	39010	680	7323
SOURCE # 24	HOSAHT 1	77400	43400	720	7737
SOURCE # 25	HOSAHT 2	77350	43350	720	7776
SOURCE # 26	HOSAHT 3	77300	43300	720	7815
SOURCE # 27	HOSADZ 1	77250	43250	720	7855
SOURCE # 28	HOSADZ 2	77200	43200	720	7895
SOURCE # 29	HOSADZ 3	77150	43150	720	7936
SOURCE # 30	HOSABU	77410	43410	720	7729
SOURCE # 31	JOSAHT 1	80600	43700	630	4760
SOURCE # 32	JOSAHT 2	80550	43650	630	4786
SOURCE # 33	JOSAHT 3	80500	43600	630	4814
SOURCE # 34	JOSADZ 1	80450	43550	630	4842
SOURCE # 35	JOSADZ 2	80400	43500	630	4871
SOURCE # 36	JOSADZ 3	80350	43450	630	4902
SOURCE # 37	JOSABU	80610	43710	630	4754
SOURCE # 38	CPDRILL 1	75500	33700	460	12475
SOURCE # 39	CPDRILL 2	75450	33650	460	12546
SOURCE # 40	CPDRILL 3	75400	33600	460	12616
SOURCE # 41	SPDRILL 1	74000	34800	480	13025
SOURCE # 42	SPDRILL 2	73950	34750	480	13094
SOURCE # 43	SPDRILL 3	73900	34700	480	13163
SOURCE # 44	SKPDRILL 1	75600	42100	420	9377
SOURCE # 45	SKPDRILL 2	75550	42050	420	9425
SOURCE # 46	SKPDRILL 3	75500	42000	420	9474
SOURCE # 47	LPDRILL 1	76900	39600	440	8372
SOURCE # 48	LPDRILL 2	76850	39550	440	8433
SOURCE # 49	LPDRILL 3	76800	39500	440	8495
SOURCE # 50	TSFHT	85300	37500	620	4332
SOURCE # 51	TSFDZ	85250	37450	620	4378

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	63	58	55	57	28	21	0	0	0
0									
A-wt	24	32	39	48	25	21	1	1	-2
-7									
□									

APPENDIX H

Soundcalc Output –Ore Processing Equipment

HGMWCMP.TXT
GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 1 - STS-HBC -

PROJECT - HGMWCMP

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1	51	26	65	0	0	0	1
SOURCE #	2	51	26	66	0	0	0	1
SOURCE #	3	51	26	66	0	0	0	1
SOURCE #	4	43	20	59	0	0	0	0
SOURCE #	5	43	19	58	0	0	0	0
SOURCE #	6	43	20	59	0	0	0	0
SOURCE #	7	43	20	59	0	0	0	0
SOURCE #	8	43	20	59	0	0	0	0
SOURCE #	9	43	20	59	0	0	0	0
BACKGROUND		0	86					
TOTAL wo bkg		57	32					
TOTAL w bkg		57	86					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 1	STS-HBC	76898	47837	527	
SOURCE # 1	Primary Crusher	79767	41378	548	7067
SOURCE # 2	SAG Mill	80714	41311	556	7559
SOURCE # 3	Ball Mill	80812	41287	556	7630
SOURCE # 4	Regrind Mill 1	80996	41228	559	7776
SOURCE # 5	Regrind Mill 2	81013	41223	559	7789
SOURCE # 6	Regrind Mill 3	81031	41219	559	7802
SOURCE # 7	Regrind Mill 4	80991	41208	559	7790
SOURCE # 8	Regrind Mill 5	81008	41204	559	7803
SOURCE # 9	Regrind Mill 6	81026	41199	559	7816

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	56	51	37	35	17	0	0	0	0
0									
A-wt	16	25	21	27	14	0	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 2 - STS-KIP -

PROJECT - HGMWCMP

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1	54	29	63	0	0	0	1
SOURCE #	2	54	29	63	0	0	0	1
SOURCE #	3	54	29	63	0	0	0	1
SOURCE #	4	46	20	58	0	0	0	0
SOURCE #	5	46	20	57	0	0	0	0
SOURCE #	6	46	20	58	0	0	0	0
SOURCE #	7	46	20	58	0	0	0	0

				HGMWCMP.TXT			
SOURCE #	8	46	20	58	0	0	0
SOURCE #	9	46	20	58	0	0	0
BACKGROUND		77	89				

TOTAL wo bkg	60	34
TOTAL w bkg	77	89

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	2	STS-KIP	79441	36121	570	
SOURCE #	1	Primary Crusher	79767	41378	548	5267
SOURCE #	2	SAG Mill	80714	41311	556	5344
SOURCE #	3	Ball Mill	80812	41287	556	5345
SOURCE #	4	Regrind Mill 1	80996	41228	559	5338
SOURCE #	5	Regrind Mill 2	81013	41223	559	5338
SOURCE #	6	Regrind Mill 3	81031	41219	559	5340
SOURCE #	7	Regrind Mill 4	80991	41208	559	5317
SOURCE #	8	Regrind Mill 5	81008	41204	559	5319
SOURCE #	9	Regrind Mill 6	81026	41199	559	5319

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
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16K

LINEAR	59	54	40	39	22	1	0	0	0
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0

A-wt	19	28	24	30	18	1	1	1	-2
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-7

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GEOSONICS SOUND-CALC SOUND PROJECTIONS AT RECEIVER # 3 - STS-Loc1 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	49	24	68	0	0	0	2
SOURCE # 2	48	23	68	0	0	0	2
SOURCE # 3	48	23	68	0	0	0	2
SOURCE # 4	40	19	59	0	0	0	0
SOURCE # 5	40	19	58	0	0	0	0
SOURCE # 6	40	19	59	0	0	0	0
SOURCE # 7	40	19	59	0	0	0	0
SOURCE # 8	40	19	59	0	0	0	0
SOURCE # 9	40	19	59	0	0	0	0
BACKGROUND	0	69					

TOTAL wo bkg	54	31
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TOTAL w bkg	54	69
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TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	3	STS-Loc1	73466	33832	475	

				HGMWCMP.TXT			
SOURCE #	1	Primary Crusher		79767	41378	548	9831
SOURCE #	2	SAG Mill		80714	41311	556	10416
SOURCE #	3	Ball Mill		80812	41287	556	10467
SOURCE #	4	Regrind Mill 1		80996	41228	559	10555
SOURCE #	5	Regrind Mill 2		81013	41223	559	10563
SOURCE #	6	Regrind Mill 3		81031	41219	559	10573
SOURCE #	7	Regrind Mill 4		80991	41208	559	10537
SOURCE #	8	Regrind Mill 5		81008	41204	559	10546
SOURCE #	9	Regrind Mill 6		81026	41199	559	10556

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	53	48	34	32	12	0	0	0	0
0									
A-wt	13	22	18	23	9	0	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 4 - STS-Loc3 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE					
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.	
SOURCE # 1	52	27	65	0	0	0	1	
SOURCE # 2	51	26	66	0	0	0	1	
SOURCE # 3	51	26	66	0	0	0	1	
SOURCE # 4	43	20	59	0	0	0	0	
SOURCE # 5	43	19	58	0	0	0	0	
SOURCE # 6	43	20	59	0	0	0	0	
SOURCE # 7	43	20	59	0	0	0	0	
SOURCE # 8	43	20	59	0	0	0	0	
SOURCE # 9	43	20	59	0	0	0	0	
BACKGROUND	0	63						
TOTAL wo bkg	57	32						
TOTAL w bkg	57	63						

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	4 STS-Loc3	73386	39149	525	
SOURCE #	1 Primary Crusher	79767	41378	548	6759
SOURCE #	2 SAG Mill	80714	41311	556	7641
SOURCE #	3 Ball Mill	80812	41287	556	7728
SOURCE #	4 Regrind Mill 1	80996	41228	559	7888
SOURCE #	5 Regrind Mill 2	81013	41223	559	7904
SOURCE #	6 Regrind Mill 3	81031	41219	559	7920
SOURCE #	7 Regrind Mill 4	80991	41208	559	7878
SOURCE #	8 Regrind Mill 5	81008	41204	559	7894
SOURCE #	9 Regrind Mill 6	81026	41199	559	7910

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	56	51	37	35	17	0	0	0	0
0									
A-wt	16	25	21	27	14	0	1	1	-2

HGMWCMP.TXT

-7

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
 \ AT RECEIVER # 5 - STS-HouseSO/GMH -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	56	30	62	0	0	0	1
SOURCE # 2	57	32	61	0	0	0	0
SOURCE # 3	57	32	60	0	0	0	0
SOURCE # 4	50	21	57	0	0	0	0
SOURCE # 5	50	21	56	0	0	0	0
SOURCE # 6	50	22	57	0	0	0	0
SOURCE # 7	50	21	57	0	0	0	0
SOURCE # 8	50	21	57	0	0	0	0
SOURCE # 9	50	22	57	0	0	0	0
BACKGROUND	0	63					

TOTAL wo bkg 63 37
 TOTAL w bkg 63 63

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER # 5	STS-HouseSO/GMH		82759	38125	560	
SOURCE # 1	Primary Crusher		79767	41378	548	4419
SOURCE # 2	SAG Mill		80714	41311	556	3786
SOURCE # 3	Ball Mill		80812	41287	556	3713
SOURCE # 4	Regrind Mill 1		80996	41228	559	3568
SOURCE # 5	Regrind Mill 2		81013	41223	559	3556
SOURCE # 6	Regrind Mill 3		81031	41219	559	3543
SOURCE # 7	Regrind Mill 4		80991	41208	559	3553
SOURCE # 8	Regrind Mill 5		81008	41204	559	3542
SOURCE # 9	Regrind Mill 6		81026	41199	559	3528

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	62	57	43	42	25	4	0	0	0
0									
A-wt	22	30	27	33	22	4	1	1	-2

-7

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
 \ AT RECEIVER # 6 - STS-HouseSOR -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	59	34	58	0	0	0	0
SOURCE # 2	62	36	56	0	0	0	0
SOURCE # 3	62	37	56	0	0	0	0
SOURCE # 4	55	24	54	0	0	0	0
SOURCE # 5	55	24	54	0	0	0	0

				HGMWCMP.TXT			
SOURCE #	6	55	24	54	0	0	0
SOURCE #	7	55	24	54	0	0	0
SOURCE #	8	55	24	54	0	0	0
SOURCE #	9	55	24	54	0	0	0
BACKGROUND		0	65				

TOTAL wo bkg	67	41
TOTAL w bkg	67	65

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	6	STS-HouseSOR	81823	39370	547	
SOURCE #	1	Primary Crusher	79767	41378	548	2873
SOURCE #	2	SAG Mill	80714	41311	556	2236
SOURCE #	3	Ball Mill	80812	41287	556	2167
SOURCE #	4	Regrind Mill 1	80996	41228	559	2033
SOURCE #	5	Regrind Mill 2	81013	41223	559	2022
SOURCE #	6	Regrind Mill 3	81031	41219	559	2011
SOURCE #	7	Regrind Mill 4	80991	41208	559	2017
SOURCE #	8	Regrind Mill 5	81008	41204	559	2006
SOURCE #	9	Regrind Mill 6	81026	41199	559	1995

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	66	61	48	47	31	10	1	0	0
0									
A-wt	27	35	32	38	28	10	2	1	-2
-7									
0									

GEOSONICS SOUND-CALC SOUND PROJECTIONS \AT RECEIVER # 7 - STS-GMH-Rt265 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	51	26	66	0	0	0	1
SOURCE # 2	52	27	65	0	0	0	1
SOURCE # 3	52	27	65	0	0	0	1
SOURCE # 4	45	20	58	0	0	0	0
SOURCE # 5	45	20	58	0	0	0	0
SOURCE # 6	45	20	59	0	0	0	0
SOURCE # 7	45	20	58	0	0	0	0
SOURCE # 8	45	20	58	0	0	0	0
SOURCE # 9	45	20	58	0	0	0	0
BACKGROUND	8	62					

TOTAL wo bkg	58	33
TOTAL w bkg	58	62

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

HGMWCMP.TXT

			X	Y	Z	DST
RECEIVER #	7	STS-GMH-Rt265	87322	39946	568	
SOURCE #	1	Primary Crusher	79767	41378	548	7689
SOURCE #	2	SAG Mill	80714	41311	556	6747
SOURCE #	3	Ball Mill	80812	41287	556	6646
SOURCE #	4	Regrind Mill 1	80996	41228	559	6454
SOURCE #	5	Regrind Mill 2	81013	41223	559	6436
SOURCE #	6	Regrind Mill 3	81031	41219	559	6418
SOURCE #	7	Regrind Mill 4	80991	41208	559	6455
SOURCE #	8	Regrind Mill 5	81008	41204	559	6438
SOURCE #	9	Regrind Mill 6	81026	41199	559	6419

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	57	52	38	36	18	0	0	0	0
0									
A-wt	17	25	22	27	15	0	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS

AT RECEIVER # 8 - STS-SOR219 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	55	30	62	0	0	0	1
SOURCE # 2	56	31	61	0	0	0	1
SOURCE # 3	57	31	61	0	0	0	0
SOURCE # 4	49	21	57	0	0	0	0
SOURCE # 5	49	21	56	0	0	0	0
SOURCE # 6	49	21	57	0	0	0	0
SOURCE # 7	49	21	57	0	0	0	0
SOURCE # 8	49	21	57	0	0	0	0
SOURCE # 9	49	21	57	0	0	0	0
BACKGROUND	0	59					
TOTAL wo bkg	62	36					
TOTAL w bkg	62	59					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	8	STS-SOR219	83995	43603	549	
SOURCE #	1	Primary Crusher	79767	41378	548	4777
SOURCE #	2	SAG Mill	80714	41311	556	4001
SOURCE #	3	Ball Mill	80812	41287	556	3935
SOURCE #	4	Regrind Mill 1	80996	41228	559	3825
SOURCE #	5	Regrind Mill 2	81013	41223	559	3815
SOURCE #	6	Regrind Mill 3	81031	41219	559	3803
SOURCE #	7	Regrind Mill 4	80991	41208	559	3841
SOURCE #	8	Regrind Mill 5	81008	41204	559	3831
SOURCE #	9	Regrind Mill 6	81026	41199	559	3820

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	61	56	42	41	25	3	0	0	0

HGMWCMP.TXT

0
A-wt 22 30 26 33 21 3 1 1 -2
-7
□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 9 - STS-5099GMH -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	47	23	69	0	0	0	2
SOURCE # 2	48	24	68	0	0	0	2
SOURCE # 3	48	24	68	0	0	0	2
SOURCE # 4	41	19	59	0	0	0	0
SOURCE # 5	41	19	58	0	0	0	0
SOURCE # 6	41	19	59	0	0	0	0
SOURCE # 7	41	19	59	0	0	0	0
SOURCE # 8	41	19	59	0	0	0	0
SOURCE # 9	41	19	59	0	0	0	0
BACKGROUND	0	94					
TOTAL wo bkg	54	31					
TOTAL w bkg	54	94					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 9	STS-5099GMH	90708	38956	576	
SOURCE # 1	Primary Crusher	79767	41378	548	11205
SOURCE # 2	SAG Mill	80714	41311	556	10267
SOURCE # 3	Ball Mill	80812	41287	556	10166
SOURCE # 4	Regrind Mill 1	80996	41228	559	9974
SOURCE # 5	Regrind Mill 2	81013	41223	559	9956
SOURCE # 6	Regrind Mill 3	81031	41219	559	9938
SOURCE # 7	Regrind Mill 4	80991	41208	559	9974
SOURCE # 8	Regrind Mill 5	81008	41204	559	9957
SOURCE # 9	Regrind Mill 6	81026	41199	559	9938

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	53	48	34	31	12	0	0	0	0
0									
A-wt	13	22	18	23	9	0	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 10 - STS-SR29/204 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	47	23	69	0	0	0	2
SOURCE # 2	48	23	68	0	0	0	2
SOURCE # 3	48	23	68	0	0	0	2

HGMWCMP.TXT							
SOURCE #	4	40	19	59	0	0	0
SOURCE #	5	40	19	58	0	0	0
SOURCE #	6	40	19	59	0	0	0
SOURCE #	7	40	19	59	0	0	0
SOURCE #	8	40	19	59	0	0	0
SOURCE #	9	40	19	59	0	0	0
BACKGROUND		0	93				

TOTAL wo bkg	54	30
TOTAL w bkg	54	93

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	10 STS-SR29/204	91534	39553	576	
SOURCE #	1 Primary Crusher	79767	41378	548	11907
SOURCE #	2 SAG Mill	80714	41311	556	10961
SOURCE #	3 Ball Mill	80812	41287	556	10860
SOURCE #	4 Regrind Mill 1	80996	41228	559	10670
SOURCE #	5 Regrind Mill 2	81013	41223	559	10652
SOURCE #	6 Regrind Mill 3	81031	41219	559	10634
SOURCE #	7 Regrind Mill 4	80991	41208	559	10672
SOURCE #	8 Regrind Mill 5	81008	41204	559	10654
SOURCE #	9 Regrind Mill 6	81026	41199	559	10636

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	52	47	33	31	11	0	0	0	0
0									
A-wt	13	21	17	22	8	0	1	1	-2
-7									

GEOSONICS SOUND-CALC SOUND PROJECTIONS AT RECEIVER # 11 - Prop-1 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	50	25	67	0	0	0	1
SOURCE # 2	51	26	66	0	0	0	1
SOURCE # 3	51	26	66	0	0	0	1
SOURCE # 4	44	20	58	0	0	0	0
SOURCE # 5	44	19	58	0	0	0	0
SOURCE # 6	44	20	59	0	0	0	0
SOURCE # 7	44	20	59	0	0	0	0
SOURCE # 8	44	20	59	0	0	0	0
SOURCE # 9	44	20	59	0	0	0	0
BACKGROUND	0	0					
TOTAL wo bkg	57	32					
TOTAL w bkg	57	32					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

HGMWCMP.TXT
COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	11	Prop-1	87947	42931	568	
SOURCE #	1	Primary Crusher	79767	41378	548	8326
SOURCE #	2	SAG Mill	80714	41311	556	7411
SOURCE #	3	Ball Mill	80812	41287	556	7321
SOURCE #	4	Regrind Mill 1	80996	41228	559	7156
SOURCE #	5	Regrind Mill 2	81013	41223	559	7141
SOURCE #	6	Regrind Mill 3	81031	41219	559	7124
SOURCE #	7	Regrind Mill 4	80991	41208	559	7166
SOURCE #	8	Regrind Mill 5	81008	41204	559	7150
SOURCE #	9	Regrind Mill 6	81026	41199	559	7134

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	56	51	37	35	17	0	0	0	0
0									
A-wt	16	25	21	26	14	0	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 12 - Prop-2 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	55	29	63	0	0	0	1
SOURCE # 2	55	30	62	0	0	0	1
SOURCE # 3	55	30	62	0	0	0	1
SOURCE # 4	47	20	58	0	0	0	0
SOURCE # 5	47	20	57	0	0	0	0
SOURCE # 6	47	20	58	0	0	0	0
SOURCE # 7	47	20	58	0	0	0	0
SOURCE # 8	47	20	58	0	0	0	0
SOURCE # 9	47	20	58	0	0	0	0
BACKGROUND	0	0					
TOTAL wo bkg	61	35					
TOTAL w bkg	61	35					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	12	Prop-2	80923	46071	530	
SOURCE #	1	Primary Crusher	79767	41378	548	4833
SOURCE #	2	SAG Mill	80714	41311	556	4763
SOURCE #	3	Ball Mill	80812	41287	556	4784
SOURCE #	4	Regrind Mill 1	80996	41228	559	4843
SOURCE #	5	Regrind Mill 2	81013	41223	559	4848
SOURCE #	6	Regrind Mill 3	81031	41219	559	4853
SOURCE #	7	Regrind Mill 4	80991	41208	559	4863
SOURCE #	8	Regrind Mill 5	81008	41204	559	4867
SOURCE #	9	Regrind Mill 6	81026	41199	559	4873

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
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16K
 LINEAR 60 55 41 40 23 2 0 0 0
 0
 A-wt 20 29 25 31 20 2 1 1 -2
 -7
 []

HGMWCMP.TXT

GEOSONICS SOUND-CALC SOUND PROJECTIONS AT RECEIVER # 13 - Prop-3 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL DB(Lin)	DBA	DBA SPHERE	ATTENUATION PATH	FROM /1000 Ft	REF. DISTANCE BARRIERS	ATMOS.
SOURCE # 1	51	26	66	0	0	0	1
SOURCE # 2	50	25	67	0	0	0	1
SOURCE # 3	50	25	67	0	0	0	1
SOURCE # 4	42	19	59	0	0	0	0
SOURCE # 5	42	19	58	0	0	0	0
SOURCE # 6	42	19	59	0	0	0	0
SOURCE # 7	42	19	59	0	0	0	0
SOURCE # 8	42	19	59	0	0	0	0
SOURCE # 9	42	19	59	0	0	0	0
BACKGROUND	0	0					
TOTAL wo bkg	56	32					
TOTAL w bkg	56	32					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

	X	Y	Z	DST
RECEIVER # 13 Prop-3	72467	40006	525	
SOURCE # 1 Primary Crusher	79767	41378	548	7427
SOURCE # 2 SAG Mill	80714	41311	556	8350
SOURCE # 3 Ball Mill	80812	41287	556	8443
SOURCE # 4 Regrind Mill 1	80996	41228	559	8616
SOURCE # 5 Regrind Mill 2	81013	41223	559	8632
SOURCE # 6 Regrind Mill 3	81031	41219	559	8649
SOURCE # 7 Regrind Mill 4	80991	41208	559	8608
SOURCE # 8 Regrind Mill 5	81008	41204	559	8624
SOURCE # 9 Regrind Mill 6	81026	41199	559	8641

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	55	50	36	34	16	0	0	0	0
0									
A-wt	15	24	20	26	13	0	1	1	-2
-7									
0									

GEOSONICS SOUND-CALC SOUND PROJECTIONS AT RECEIVER # 14 - Prop-4 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL DB(Lin)	DBA	DBA SPHERE	ATTENUATION PATH	FROM /1000 Ft	REF. DISTANCE BARRIERS	ATMOS.
SOURCE # 1	46	22	69	0	0	0	2

HGMWCMP.TXT							
SOURCE #	2	46	22	70	0	0	2
SOURCE #	3	45	22	70	0	0	2
SOURCE #	4	38	19	59	0	0	0
SOURCE #	5	38	19	58	0	0	0
SOURCE #	6	38	19	59	0	0	0
SOURCE #	7	38	19	59	0	0	0
SOURCE #	8	38	19	59	0	0	0
SOURCE #	9	38	19	59	0	0	0
BACKGROUND		0	0				

TOTAL wo bkg	52	30
TOTAL w bkg	52	30

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	14 Prop-4	68569	34761	500	
SOURCE #	1 Primary Crusher	79767	41378	548	13007
SOURCE #	2 SAG Mill	80714	41311	556	13799
SOURCE #	3 Ball Mill	80812	41287	556	13874
SOURCE #	4 Regrind Mill 1	80996	41228	559	14009
SOURCE #	5 Regrind Mill 2	81013	41223	559	14021
SOURCE #	6 Regrind Mill 3	81031	41219	559	14036
SOURCE #	7 Regrind Mill 4	80991	41208	559	13995
SOURCE #	8 Regrind Mill 5	81008	41204	559	14008
SOURCE #	9 Regrind Mill 6	81026	41199	559	14022

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	50	46	31	28	7	0	0	0	0
0									
A-wt	11	19	15	20	4	0	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS AT RECEIVER # 15 - Prop-5 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	48	23	68	0	0	0	2
SOURCE # 2	47	23	69	0	0	0	2
SOURCE # 3	47	23	69	0	0	0	2
SOURCE # 4	40	19	59	0	0	0	0
SOURCE # 5	40	19	58	0	0	0	0
SOURCE # 6	40	19	59	0	0	0	0
SOURCE # 7	40	19	59	0	0	0	0
SOURCE # 8	40	19	59	0	0	0	0
SOURCE # 9	40	19	59	0	0	0	0
BACKGROUND	0	0					
TOTAL wo bkg	53	30					
TOTAL w bkg	53	30					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

HGMWCMP.TXT

COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	15	Prop-5	72538	33412	475	
SOURCE #	1	Primary Crusher	79767	41378	548	10757
SOURCE #	2	SAG Mill	80714	41311	556	11369
SOURCE #	3	Ball Mill	80812	41287	556	11423
SOURCE #	4	Regrind Mill 1	80996	41228	559	11516
SOURCE #	5	Regrind Mill 2	81013	41223	559	11525
SOURCE #	6	Regrind Mill 3	81031	41219	559	11536
SOURCE #	7	Regrind Mill 4	80991	41208	559	11499
SOURCE #	8	Regrind Mill 5	81008	41204	559	11509
SOURCE #	9	Regrind Mill 6	81026	41199	559	11519

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	52	47	33	31	11	0	0	0	0
0									
A-wt	13	21	17	22	8	0	1	1	-2
-7									
0									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 16 - Prop-6 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	46	22	69	0	0	0	2
SOURCE # 2	46	22	69	0	0	0	2
SOURCE # 3	46	22	69	0	0	0	2
SOURCE # 4	38	19	59	0	0	0	0
SOURCE # 5	38	19	58	0	0	0	0
SOURCE # 6	38	19	59	0	0	0	0
SOURCE # 7	38	19	59	0	0	0	0
SOURCE # 8	38	19	59	0	0	0	0
SOURCE # 9	38	19	59	0	0	0	0
BACKGROUND	0	0					
TOTAL wo bkg	52	30					
TOTAL w bkg	52	30					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	16	Prop-6	75403	29145	500	
SOURCE #	1	Primary Crusher	79767	41378	548	12988
SOURCE #	2	SAG Mill	80714	41311	556	13275
SOURCE #	3	Ball Mill	80812	41287	556	13293
SOURCE #	4	Regrind Mill 1	80996	41228	559	13314
SOURCE #	5	Regrind Mill 2	81013	41223	559	13317
SOURCE #	6	Regrind Mill 3	81031	41219	559	13321
SOURCE #	7	Regrind Mill 4	80991	41208	559	13294
SOURCE #	8	Regrind Mill 5	81008	41204	559	13298
SOURCE #	9	Regrind Mill 6	81026	41199	559	13301

HGMWCMP.TXT

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	51	46	31	29	8	0	0	0	0
0									
A-wt	11	20	15	20	5	0	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 17 - Prop-7 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE			ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	BARRIERS	
SOURCE # 1	56	30	62	0	0	1
SOURCE # 2	56	31	62	0	0	1
SOURCE # 3	56	31	62	0	0	1
SOURCE # 4	48	21	57	0	0	0
SOURCE # 5	48	20	57	0	0	0
SOURCE # 6	48	21	57	0	0	0
SOURCE # 7	48	21	57	0	0	0
SOURCE # 8	48	21	57	0	0	0
SOURCE # 9	48	21	57	0	0	0
BACKGROUND	0	0				
TOTAL wo bkg	62	36				
TOTAL w bkg	62	36				

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 17	Prop-7	80365	37050	500	
SOURCE # 1	Primary Crusher	79767	41378	548	4369
SOURCE # 2	SAG Mill	80714	41311	556	4276
SOURCE # 3	Ball Mill	80812	41287	556	4261
SOURCE # 4	Regrind Mill 1	80996	41228	559	4225
SOURCE # 5	Regrind Mill 2	81013	41223	559	4223
SOURCE # 6	Regrind Mill 3	81031	41219	559	4222
SOURCE # 7	Regrind Mill 4	80991	41208	559	4205
SOURCE # 8	Regrind Mill 5	81008	41204	559	4203
SOURCE # 9	Regrind Mill 6	81026	41199	559	4201

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	61	56	42	41	24	4	0	0	0
0									
A-wt	21	30	26	32	21	4	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 18 - Prop-8 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL	DBA ATTENUATION FROM REF. DISTANCE
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HGMWCMP.TXT								
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.	
SOURCE # 1	46	22	70	0	0	0	2	
SOURCE # 2	46	22	69	0	0	0	2	
SOURCE # 3	46	22	69	0	0	0	2	
SOURCE # 4	39	19	59	0	0	0	0	
SOURCE # 5	39	19	58	0	0	0	0	
SOURCE # 6	39	19	59	0	0	0	0	
SOURCE # 7	39	19	59	0	0	0	0	
SOURCE # 8	39	19	59	0	0	0	0	
SOURCE # 9	39	19	59	0	0	0	0	
BACKGROUND	0	0						
TOTAL wo bkg	52	30						
TOTAL w bkg	52	30						

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 18	Prop-8	87710	30317	525	
SOURCE # 1	Primary Crusher	79767	41378	548	13617
SOURCE # 2	SAG Mill	80714	41311	556	13031
SOURCE # 3	Ball Mill	80812	41287	556	12958
SOURCE # 4	Regrind Mill 1	80996	41228	559	12811
SOURCE # 5	Regrind Mill 2	81013	41223	559	12798
SOURCE # 6	Regrind Mill 3	81031	41219	559	12785
SOURCE # 7	Regrind Mill 4	80991	41208	559	12796
SOURCE # 8	Regrind Mill 5	81008	41204	559	12784
SOURCE # 9	Regrind Mill 6	81026	41199	559	12770

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	51	46	31	29	8	0	0	0	0
0									
A-wt	11	20	15	20	5	0	1	1	-2
-7									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 19 - Prop-9 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	46	22	69	0	0	0	2
SOURCE # 2	47	23	69	0	0	0	2
SOURCE # 3	47	23	69	0	0	0	2
SOURCE # 4	39	19	59	0	0	0	0
SOURCE # 5	39	19	58	0	0	0	0
SOURCE # 6	39	19	59	0	0	0	0
SOURCE # 7	39	19	59	0	0	0	0
SOURCE # 8	39	19	59	0	0	0	0
SOURCE # 9	39	19	59	0	0	0	0
BACKGROUND	0	0					
TOTAL wo bkg	53	30					
TOTAL w bkg	53	30					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

HGMWCMP.TXT

COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	19	Prop-9	90181	33532	525	
SOURCE #	1	Primary Crusher	79767	41378	548	13038
SOURCE #	2	SAG Mill	80714	41311	556	12253
SOURCE #	3	Ball Mill	80812	41287	556	12162
SOURCE #	4	Regrind Mill 1	80996	41228	559	11983
SOURCE #	5	Regrind Mill 2	81013	41223	559	11966
SOURCE #	6	Regrind Mill 3	81031	41219	559	11950
SOURCE #	7	Regrind Mill 4	80991	41208	559	11974
SOURCE #	8	Regrind Mill 5	81008	41204	559	11958
SOURCE #	9	Regrind Mill 6	81026	41199	559	11941

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	51	46	32	29	9	0	0	0	0
0									
A-wt	12	20	16	21	6	0	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 20 - Prop-10 -

PROJECT - HGMWCMP

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	54	29	63	0	0	0	1
SOURCE # 2	56	31	62	0	0	0	1
SOURCE # 3	56	31	61	0	0	0	1
SOURCE # 4	49	21	57	0	0	0	0
SOURCE # 5	49	21	57	0	0	0	0
SOURCE # 6	49	21	57	0	0	0	0
SOURCE # 7	49	21	57	0	0	0	0
SOURCE # 8	49	21	57	0	0	0	0
SOURCE # 9	49	21	57	0	0	0	0
BACKGROUND	0	0					
TOTAL wo bkg	62	36					
TOTAL w bkg	62	36					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	20	Prop-10	84972	41819	550	
SOURCE #	1	Primary Crusher	79767	41378	548	5223
SOURCE #	2	SAG Mill	80714	41311	556	4287
SOURCE #	3	Ball Mill	80812	41287	556	4193
SOURCE #	4	Regrind Mill 1	80996	41228	559	4019
SOURCE #	5	Regrind Mill 2	81013	41223	559	4003
SOURCE #	6	Regrind Mill 3	81031	41219	559	3986
SOURCE #	7	Regrind Mill 4	80991	41208	559	4027
SOURCE #	8	Regrind Mill 5	81008	41204	559	4011

SOURCE #	9	Regrind Mill 6	HGMWCMP.TXT						
			81026	41199	559	3994			
PROJECTED OCTAVE LEVELS:									
OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	60	55	42	41	24	1	0	0	0
0									
A-wt	21	29	26	32	20	1	1	1	-2
-7									
□									

HGMWCMP.TXT

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 21 - Greg561 -

PROJECT - HGMWCMP

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1	52	27	65	0	0	0	1
SOURCE #	2	52	26	65	0	0	0	1
SOURCE #	3	51	26	65	0	0	0	1
SOURCE #	4	44	20	58	0	0	0	0
SOURCE #	5	44	19	58	0	0	0	0
SOURCE #	6	44	20	59	0	0	0	0
SOURCE #	7	44	20	59	0	0	0	0
SOURCE #	8	44	20	59	0	0	0	0
SOURCE #	9	44	20	59	0	0	0	0
BACKGROUND		0	0					
TOTAL wo bkg		58	33					
TOTAL w bkg		58	33					

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 21	Greg561	77384	35138	520	
SOURCE # 1	Primary Crusher	79767	41378	548	6679
SOURCE # 2	SAG Mill	80714	41311	556	7015
SOURCE # 3	Ball Mill	80812	41287	556	7040
SOURCE # 4	Regrind Mill 1	80996	41228	559	7080
SOURCE # 5	Regrind Mill 2	81013	41223	559	7085
SOURCE # 6	Regrind Mill 3	81031	41219	559	7090
SOURCE # 7	Regrind Mill 4	80991	41208	559	7060
SOURCE # 8	Regrind Mill 5	81008	41204	559	7066
SOURCE # 9	Regrind Mill 6	81026	41199	559	7071

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	56	52	37	36	18	0	0	0	0
0									
A-wt	17	25	21	28	15	0	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 22 - Greg565 -

PROJECT - HGMWCMP

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE #	1	52	27	65	0	0	0	1
SOURCE #	2	52	26	65	0	0	0	1
SOURCE #	3	52	26	65	0	0	0	1
SOURCE #	4	44	20	58	0	0	0	0
SOURCE #	5	44	19	58	0	0	0	0
SOURCE #	6	44	20	59	0	0	0	0

				HGMWCMP.TXT				
SOURCE #	7	44	20	59	0	0	0	0
SOURCE #	8	44	20	59	0	0	0	0
SOURCE #	9	44	20	59	0	0	0	0
BACKGROUND		0	0					

TOTAL wo bkg	58	33
TOTAL w bkg	58	33

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

RECEIVER #			X	Y	Z	DST
22	Greg565		77248	35342	520	
SOURCE #	1	Primary Crusher	79767	41378	548	6540
SOURCE #	2	SAG Mill	80714	41311	556	6903
SOURCE #	3	Ball Mill	80812	41287	556	6932
SOURCE #	4	Regrind Mill 1	80996	41228	559	6978
SOURCE #	5	Regrind Mill 2	81013	41223	559	6983
SOURCE #	6	Regrind Mill 3	81031	41219	559	6989
SOURCE #	7	Regrind Mill 4	80991	41208	559	6958
SOURCE #	8	Regrind Mill 5	81008	41204	559	6964
SOURCE #	9	Regrind Mill 6	81026	41199	559	6969

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	56	52	38	36	18	0	0	0	0
0									
A-wt	17	25	22	28	15	0	1	1	-2
-7									
□									

APPENDIX I

Soundcalc Output –Haile Gold Mine One Mile Radius Results

OneMileResults.TXT
 GEOSONICS SOUND-CALC SOUND PROJECTIONS
 AT RECEIVER # 1 - 1M-1 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE					
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.	
SOURCE # 1	44	21	71	0	0	0	3	
SOURCE # 2	44	22	71	0	0	0	3	
SOURCE # 3	44	22	71	0	0	0	3	
SOURCE # 4	37	19	59	0	0	0	0	
SOURCE # 5	37	19	59	0	0	0	0	
SOURCE # 6	37	19	59	0	0	0	0	
SOURCE # 7	37	19	59	0	0	0	0	
SOURCE # 8	37	19	59	0	0	0	0	
SOURCE # 9	37	19	59	0	0	0	0	
SOURCE # 10	30	19	63	0	0	0	3	
SOURCE # 11	30	19	63	0	0	0	3	
SOURCE # 12	30	19	63	0	0	0	4	
SOURCE # 13	30	19	63	0	0	0	4	
SOURCE # 14	30	19	63	0	0	0	4	
SOURCE # 15	30	19	63	0	0	0	4	
SOURCE # 16	42	27	77	0	0	0	7	
SOURCE # 17	32	19	63	0	0	0	3	
SOURCE # 18	32	19	63	0	0	0	3	
SOURCE # 19	32	19	63	0	0	0	3	
SOURCE # 20	32	19	63	0	0	0	3	
SOURCE # 21	32	19	63	0	0	0	3	
SOURCE # 22	32	19	63	0	0	0	3	
SOURCE # 23	46	31	74	0	0	0	5	
SOURCE # 24	32	19	63	0	0	0	3	
SOURCE # 25	32	19	63	0	0	0	3	
SOURCE # 26	32	19	63	0	0	0	3	
SOURCE # 27	32	19	63	0	0	0	3	
SOURCE # 28	32	19	63	0	0	0	3	
SOURCE # 29	32	19	63	0	0	0	3	
SOURCE # 30	45	30	75	0	0	0	5	
SOURCE # 31	33	19	63	0	0	0	3	
SOURCE # 32	33	19	63	0	0	0	3	
SOURCE # 33	33	19	63	0	0	0	3	
SOURCE # 34	33	19	63	0	0	0	3	
SOURCE # 35	33	19	63	0	0	0	3	
SOURCE # 36	33	19	63	0	0	0	3	
SOURCE # 37	47	32	74	0	0	0	4	
SOURCE # 38	36	21	72	0	0	0	2	
SOURCE # 39	36	21	72	0	0	0	2	
SOURCE # 40	36	21	72	0	0	0	2	
SOURCE # 41	35	21	72	0	0	0	2	
SOURCE # 42	35	21	72	0	0	0	2	
SOURCE # 43	35	21	72	0	0	0	2	
SOURCE # 44	36	21	71	0	0	0	2	
SOURCE # 45	36	21	71	0	0	0	2	
SOURCE # 46	36	21	71	0	0	0	2	
SOURCE # 47	37	21	71	0	0	0	2	
SOURCE # 48	37	21	71	0	0	0	2	
SOURCE # 49	37	21	71	0	0	0	2	
SOURCE # 50	37	20	62	0	0	0	2	
SOURCE # 51	37	20	62	0	0	0	2	
BACKGROUND	0	0						

□

TOTAL wo bkg	55	40
TOTAL w bkg	55	40

OneMileResults.TXT
 TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

RECEIVER #		X	Y	Z	DST
1	1M-1	96641	39104	576	
SOURCE # 1	Primary Crusher	79767	41378	548	17026
SOURCE # 2	SAG Mill	80714	41311	556	16078
SOURCE # 3	Ball Mill	80812	41287	556	15978
SOURCE # 4	Regrind Mill 1	80996	41228	559	15788
SOURCE # 5	Regrind Mill 2	81013	41223	559	15771
SOURCE # 6	Regrind Mill 3	81031	41219	559	15752
SOURCE # 7	Regrind Mill 4	80991	41208	559	15790
SOURCE # 8	Regrind Mill 5	81008	41204	559	15773
SOURCE # 9	Regrind Mill 6	81026	41199	559	15754
SOURCE # 10	ROSAHT 1	71900	35000	680	25079
SOURCE # 11	ROSAHT 2	71850	34950	680	25136
SOURCE # 12	ROSAHT 3	71800	34900	680	25194
SOURCE # 13	ROSADZ 1	71750	34850	680	25252
SOURCE # 14	ROSADZ 2	71700	34800	680	25309
SOURCE # 15	ROSADZ 3	71650	34750	680	25367
SOURCE # 16	ROSA BUA	71910	35010	675	25067
SOURCE # 17	JPHT 1	78200	39000	680	18441
SOURCE # 18	JPHT 2	78150	38950	680	18491
SOURCE # 19	JPHT 3	78100	38900	680	18542
SOURCE # 20	JPDZ 1	78050	38850	680	18593
SOURCE # 21	JPDZ 2	78000	38800	680	18643
SOURCE # 22	JPDZ3	78210	39010	680	18431
SOURCE # 23	JPBU	78210	39010	680	18431
SOURCE # 24	HOSAHT 1	77400	43400	720	19715
SOURCE # 25	HOSAHT 2	77350	43350	720	19753
SOURCE # 26	HOSAHT 3	77300	43300	720	19791
SOURCE # 27	HOSADZ 1	77250	43250	720	19829
SOURCE # 28	HOSADZ 2	77200	43200	720	19868
SOURCE # 29	HOSADZ 3	77150	43150	720	19907
SOURCE # 30	HOSABU	77410	43410	720	19707
SOURCE # 31	JOSAHT 1	80600	43700	630	16686
SOURCE # 32	JOSAHT 2	80550	43650	630	16720
SOURCE # 33	JOSAHT 3	80500	43600	630	16755
SOURCE # 34	JOSADZ 1	80450	43550	630	16790
SOURCE # 35	JOSADZ 2	80400	43500	630	16825
SOURCE # 36	JOSADZ 3	80350	43450	630	16860
SOURCE # 37	JOSABU	80610	43710	630	16679
SOURCE # 38	CPDRILL 1	75500	33700	460	21821
SOURCE # 39	CPDRILL 2	75450	33650	460	21881
SOURCE # 40	CPDRILL 3	75400	33600	460	21942
SOURCE # 41	SPDRILL 1	74000	34800	480	23046
SOURCE # 42	SPDRILL 2	73950	34750	480	23105
SOURCE # 43	SPDRILL 3	73900	34700	480	23163
SOURCE # 44	SKPDRILL 1	75600	42100	420	21253
SOURCE # 45	SKPDRILL 2	75550	42050	420	21296
SOURCE # 46	SKPDRILL 3	75500	42000	420	21339
SOURCE # 47	LPDRILL 1	76900	39600	440	19747
SOURCE # 48	LPDRILL 2	76850	39550	440	19796
SOURCE # 49	LPDRILL 3	76800	39500	440	19845
SOURCE # 50	TSFHT	85300	37500	620	11453
SOURCE # 51	TSFDZ	85250	37450	620	11510

PROJECTED OCTAVE LEVELS:
 OCTAVE 31.5 63 125 250 500 1000 2K 4K 8000
 16K
 LINEAR 53 49 46 44 10 0 0 0 0
 0

OneMileResults.TXT
A-wt 13 22 30 35 6 0 1 1 -2
-7
□

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 2 - 1M-2 -

PROJECT - HGMWC

CONTRIBUTOR	SPL DB(Lin)	DBA	SPHERE	DBA ATTENUATION PATH	FROM REF. /1000 Ft	DISTANCE BARRIERS	ATMOS.
SOURCE # 1	47	23	69	0	0	0	2
SOURCE # 2	48	24	69	0	0	0	2
SOURCE # 3	48	24	69	0	0	0	2
SOURCE # 4	40	19	59	0	0	0	0
SOURCE # 5	40	19	59	0	0	0	0
SOURCE # 6	40	19	59	0	0	0	0
SOURCE # 7	40	19	59	0	0	0	0
SOURCE # 8	40	19	59	0	0	0	0
SOURCE # 9	40	19	59	0	0	0	0
SOURCE # 10	31	19	63	0	0	0	3
SOURCE # 11	31	19	63	0	0	0	3
SOURCE # 12	31	19	63	0	0	0	3
SOURCE # 13	31	19	63	0	0	0	3
SOURCE # 14	31	19	63	0	0	0	3
SOURCE # 15	31	19	63	0	0	0	3
SOURCE # 16	44	29	76	0	0	0	6
SOURCE # 17	34	19	63	0	0	0	2
SOURCE # 18	34	19	63	0	0	0	2
SOURCE # 19	34	19	63	0	0	0	2
SOURCE # 20	34	19	63	0	0	0	2
SOURCE # 21	34	19	63	0	0	0	2
SOURCE # 22	35	19	63	0	0	0	2
SOURCE # 23	48	34	72	0	0	0	4
SOURCE # 24	36	19	63	0	0	0	2
SOURCE # 25	36	19	63	0	0	0	2
SOURCE # 26	35	19	63	0	0	0	2
SOURCE # 27	35	19	63	0	0	0	2
SOURCE # 28	35	19	63	0	0	0	2
SOURCE # 29	35	19	63	0	0	0	2
SOURCE # 30	49	35	71	0	0	0	3
SOURCE # 31	38	20	62	0	0	0	2
SOURCE # 32	38	20	62	0	0	0	2
SOURCE # 33	38	20	62	0	0	0	2
SOURCE # 34	38	20	62	0	0	0	2
SOURCE # 35	38	20	62	0	0	0	2
SOURCE # 36	38	20	62	0	0	0	2
SOURCE # 37	52	39	69	0	0	0	2
SOURCE # 38	37	21	71	0	0	0	2
SOURCE # 39	37	21	71	0	0	0	2
SOURCE # 40	37	21	71	0	0	0	2
SOURCE # 41	36	21	71	0	0	0	2
SOURCE # 42	36	21	71	0	0	0	2
SOURCE # 43	36	21	71	0	0	0	2
SOURCE # 44	39	22	70	0	0	0	1
SOURCE # 45	39	22	70	0	0	0	1
SOURCE # 46	39	22	70	0	0	0	1
SOURCE # 47	39	22	70	0	0	0	1
SOURCE # 48	39	22	70	0	0	0	1
SOURCE # 49	39	22	70	0	0	0	1
SOURCE # 50	37	20	62	0	0	0	2
SOURCE # 51	37	20	62	0	0	0	2
BACKGROUND	0	0					

□

OneMileResults.TXT

TOTAL wo bkg 59 43
 TOTAL w bkg 59 43

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

RECEIVER #		X	Y	Z	DST
2	1M-2	89446	48010	568	
SOURCE # 1	Primary Crusher	79767	41378	548	11733
SOURCE # 2	SAG Mill	80714	41311	556	11004
SOURCE # 3	Ball Mill	80812	41287	556	10941
SOURCE # 4	Regrind Mill 1	80996	41228	559	10835
SOURCE # 5	Regrind Mill 2	81013	41223	559	10824
SOURCE # 6	Regrind Mill 3	81031	41219	559	10813
SOURCE # 7	Regrind Mill 4	80991	41208	559	10851
SOURCE # 8	Regrind Mill 5	81008	41204	559	10840
SOURCE # 9	Regrind Mill 6	81026	41199	559	10829
SOURCE # 10	ROSAHT 1	71900	35000	680	21843
SOURCE # 11	ROSAHT 2	71850	34950	680	21913
SOURCE # 12	ROSAHT 3	71800	34900	680	21983
SOURCE # 13	ROSADZ 1	71750	34850	680	22053
SOURCE # 14	ROSADZ 2	71700	34800	680	22123
SOURCE # 15	ROSADZ 3	71650	34750	680	22193
SOURCE # 16	ROSA BUA	71910	35010	675	21829
SOURCE # 17	JPHT 1	78200	39000	680	14410
SOURCE # 18	JPHT 2	78150	38950	680	14480
SOURCE # 19	JPHT 3	78100	38900	680	14551
SOURCE # 20	JPDZ 1	78050	38850	680	14621
SOURCE # 21	JPDZ 2	78000	38800	680	14691
SOURCE # 22	JPDZ3	78210	39010	680	14396
SOURCE # 23	JPBU	78210	39010	680	14396
SOURCE # 24	HOSAHT 1	77400	43400	720	12898
SOURCE # 25	HOSAHT 2	77350	43350	720	12963
SOURCE # 26	HOSAHT 3	77300	43300	720	13028
SOURCE # 27	HOSADZ 1	77250	43250	720	13092
SOURCE # 28	HOSADZ 2	77200	43200	720	13157
SOURCE # 29	HOSADZ 3	77150	43150	720	13222
SOURCE # 30	HOSABU	77410	43410	720	12885
SOURCE # 31	JOSAHT 1	80600	43700	630	9840
SOURCE # 32	JOSAHT 2	80550	43650	630	9907
SOURCE # 33	JOSAHT 3	80500	43600	630	9974
SOURCE # 34	JOSADZ 1	80450	43550	630	10041
SOURCE # 35	JOSADZ 2	80400	43500	630	10108
SOURCE # 36	JOSADZ 3	80350	43450	630	10175
SOURCE # 37	JOSABU	80610	43710	630	9826
SOURCE # 38	CPDRILL 1	75500	33700	460	19981
SOURCE # 39	CPDRILL 2	75450	33650	460	20052
SOURCE # 40	CPDRILL 3	75400	33600	460	20123
SOURCE # 41	SPDRILL 1	74000	34800	480	20324
SOURCE # 42	SPDRILL 2	73950	34750	480	20395
SOURCE # 43	SPDRILL 3	73900	34700	480	20465
SOURCE # 44	SKPDRILL 1	75600	42100	420	15055
SOURCE # 45	SKPDRILL 2	75550	42050	420	15120
SOURCE # 46	SKPDRILL 3	75500	42000	420	15186
SOURCE # 47	LPDRILL 1	76900	39600	440	15104
SOURCE # 48	LPDRILL 2	76850	39550	440	15173
SOURCE # 49	LPDRILL 3	76800	39500	440	15243
SOURCE # 50	TSFHT	85300	37500	620	11298
SOURCE # 51	TSFDZ	85250	37450	620	11363

PROJECTED OCTAVE LEVELS:

OCTAVE 31.5 63 125 250 500 1000 2K 4K 8000

OneMileResults.TXT

16K
 LINEAR 56 52 49 50 17 8 0 0 0
 0
 A-wt 17 25 33 41 14 8 1 1 -2
 -7
 0

GEOSONICS SOUND-CALC SOUND PROJECTIONS
 AT RECEIVER # 3 - 1M-3 -

PROJECT - HGMWC

CONTRIBUTOR		SPL		DBA	ATTENUATION FROM REF.	DISTANCE	
		DB(Lin)		SPHERE	PATH	/1000 Ft	BARRIERS
							ATMOS.
SOURCE # 1	49	24	68	0	0	0	2
SOURCE # 2	49	25	68	0	0	0	2
SOURCE # 3	49	25	68	0	0	0	2
SOURCE # 4	41	19	59	0	0	0	0
SOURCE # 5	41	19	59	0	0	0	0
SOURCE # 6	41	19	59	0	0	0	0
SOURCE # 7	41	19	59	0	0	0	0
SOURCE # 8	41	19	59	0	0	0	0
SOURCE # 9	41	19	59	0	0	0	0
SOURCE # 10	32	19	63	0	0	0	3
SOURCE # 11	32	19	63	0	0	0	3
SOURCE # 12	32	19	63	0	0	0	3
SOURCE # 13	32	19	63	0	0	0	3
SOURCE # 14	32	19	63	0	0	0	3
SOURCE # 15	32	19	63	0	0	0	3
SOURCE # 16	45	30	75	0	0	0	5
SOURCE # 17	36	19	62	0	0	0	2
SOURCE # 18	36	19	62	0	0	0	2
SOURCE # 19	36	19	62	0	0	0	2
SOURCE # 20	36	19	62	0	0	0	2
SOURCE # 21	36	19	62	0	0	0	2
SOURCE # 22	36	20	63	0	0	0	2
SOURCE # 23	50	36	71	0	0	0	3
SOURCE # 24	38	20	62	0	0	0	1
SOURCE # 25	38	20	62	0	0	0	1
SOURCE # 26	38	20	62	0	0	0	1
SOURCE # 27	38	20	62	0	0	0	1
SOURCE # 28	38	20	62	0	0	0	1
SOURCE # 29	38	20	62	0	0	0	1
SOURCE # 30	53	39	68	0	0	0	2
SOURCE # 31	41	20	62	0	0	0	1
SOURCE # 32	40	20	62	0	0	0	1
SOURCE # 33	40	20	62	0	0	0	1
SOURCE # 34	40	20	62	0	0	0	1
SOURCE # 35	40	20	62	0	0	0	1
SOURCE # 36	40	20	62	0	0	0	1
SOURCE # 37	55	42	66	0	0	0	2
SOURCE # 38	37	21	71	0	0	0	1
SOURCE # 39	37	21	71	0	0	0	1
SOURCE # 40	37	21	71	0	0	0	1
SOURCE # 41	37	21	71	0	0	0	1
SOURCE # 42	37	21	71	0	0	0	1
SOURCE # 43	37	21	71	0	0	0	1
SOURCE # 44	42	24	69	0	0	0	1
SOURCE # 45	42	24	69	0	0	0	1
SOURCE # 46	42	24	69	0	0	0	1
SOURCE # 47	41	23	69	0	0	0	1
SOURCE # 48	41	23	69	0	0	0	1
SOURCE # 49	41	23	69	0	0	0	1
SOURCE # 50	35	19	63	0	0	0	2
SOURCE # 51	35	19	63	0	0	0	2

OneMileResults.TXT

BACKGROUND 0 0

TOTAL wo bkg 61 45
TOTAL w bkg 61 45

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER #	3 1M-3	83413	50420	530	
SOURCE #	1 Primary Crusher	79767	41378	548	9749
SOURCE #	2 SAG Mill	80714	41311	556	9499
SOURCE #	3 Ball Mill	80812	41287	556	9495
SOURCE #	4 Regrind Mill 1	80996	41228	559	9504
SOURCE #	5 Regrind Mill 2	81013	41223	559	9505
SOURCE #	6 Regrind Mill 3	81031	41219	559	9504
SOURCE #	7 Regrind Mill 4	80991	41208	559	9525
SOURCE #	8 Regrind Mill 5	81008	41204	559	9524
SOURCE #	9 Regrind Mill 6	81026	41199	559	9525
SOURCE #	10 ROSAHT 1	71900	35000	680	19244
SOURCE #	11 ROSAHT 2	71850	34950	680	19314
SOURCE #	12 ROSAHT 3	71800	34900	680	19384
SOURCE #	13 ROSADZ 1	71750	34850	680	19454
SOURCE #	14 ROSADZ 2	71700	34800	680	19524
SOURCE #	15 ROSADZ 3	71650	34750	680	19594
SOURCE #	16 ROSA BUA	71910	35010	675	19230
SOURCE #	17 JPHT 1	78200	39000	680	12554
SOURCE #	18 JPHT 2	78150	38950	680	12620
SOURCE #	19 JPHT 3	78100	38900	680	12687
SOURCE #	20 JPDZ 1	78050	38850	680	12753
SOURCE #	21 JPDZ 2	78000	38800	680	12819
SOURCE #	22 JPDZ3	78210	39010	680	12541
SOURCE #	23 JPBU	78210	39010	680	12541
SOURCE #	24 HOSAHT 1	77400	43400	720	9245
SOURCE #	25 HOSAHT 2	77350	43350	720	9315
SOURCE #	26 HOSAHT 3	77300	43300	720	9386
SOURCE #	27 HOSADZ 1	77250	43250	720	9456
SOURCE #	28 HOSADZ 2	77200	43200	720	9527
SOURCE #	29 HOSADZ 3	77150	43150	720	9597
SOURCE #	30 HOSABU	77410	43410	720	9231
SOURCE #	31 JOSAHT 1	80600	43700	630	7285
SOURCE #	32 JOSAHT 2	80550	43650	630	7351
SOURCE #	33 JOSAHT 3	80500	43600	630	7416
SOURCE #	34 JOSADZ 1	80450	43550	630	7482
SOURCE #	35 JOSADZ 2	80400	43500	630	7548
SOURCE #	36 JOSADZ 3	80350	43450	630	7614
SOURCE #	37 JOSABU	80610	43710	630	7272
SOURCE #	38 CPDRILL 1	75500	33700	460	18498
SOURCE #	39 CPDRILL 2	75450	33650	460	18564
SOURCE #	40 CPDRILL 3	75400	33600	460	18631
SOURCE #	41 SPDRILL 1	74000	34800	480	18237
SOURCE #	42 SPDRILL 2	73950	34750	480	18305
SOURCE #	43 SPDRILL 3	73900	34700	480	18374
SOURCE #	44 SKPDRILL 1	75600	42100	420	11413
SOURCE #	45 SKPDRILL 2	75550	42050	420	11484
SOURCE #	46 SKPDRILL 3	75500	42000	420	11555
SOURCE #	47 LPDRILL 1	76900	39600	440	12629
SOURCE #	48 LPDRILL 2	76850	39550	440	12697
SOURCE #	49 LPDRILL 3	76800	39500	440	12766
SOURCE #	50 TSFHT	85300	37500	620	13057
SOURCE #	51 TSFDZ	85250	37450	620	13099

OneMileResults.TXT

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	58	53	52	53	21	14	0	0	0
0									
A-wt	18	27	36	44	18	14	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 4 - 1M-4 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				BARRIERS	ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft			
SOURCE # 1	47	23	69	0	0		0	2
SOURCE # 2	46	23	69	0	0		0	2
SOURCE # 3	46	23	69	0	0		0	2
SOURCE # 4	39	19	59	0	0		0	0
SOURCE # 5	39	19	59	0	0		0	0
SOURCE # 6	39	19	59	0	0		0	0
SOURCE # 7	39	19	59	0	0		0	0
SOURCE # 8	39	19	59	0	0		0	0
SOURCE # 9	39	19	59	0	0		0	0
SOURCE # 10	32	19	63	0	0		0	3
SOURCE # 11	32	19	63	0	0		0	3
SOURCE # 12	32	19	63	0	0		0	3
SOURCE # 13	32	19	63	0	0		0	3
SOURCE # 14	32	19	63	0	0		0	3
SOURCE # 15	32	19	63	0	0		0	3
SOURCE # 16	46	31	74	0	0		0	5
SOURCE # 17	35	19	63	0	0		0	2
SOURCE # 18	35	19	63	0	0		0	2
SOURCE # 19	35	19	63	0	0		0	2
SOURCE # 20	35	19	63	0	0		0	2
SOURCE # 21	35	19	63	0	0		0	2
SOURCE # 22	35	19	63	0	0		0	2
SOURCE # 23	48	34	72	0	0		0	4
SOURCE # 24	38	20	62	0	0		0	1
SOURCE # 25	38	20	62	0	0		0	1
SOURCE # 26	38	20	62	0	0		0	1
SOURCE # 27	38	20	62	0	0		0	1
SOURCE # 28	38	20	62	0	0		0	2
SOURCE # 29	38	20	62	0	0		0	2
SOURCE # 30	52	39	69	0	0		0	2
SOURCE # 31	37	20	62	0	0		0	2
SOURCE # 32	37	20	62	0	0		0	2
SOURCE # 33	37	20	62	0	0		0	2
SOURCE # 34	37	20	62	0	0		0	2
SOURCE # 35	37	20	62	0	0		0	2
SOURCE # 36	37	20	62	0	0		0	2
SOURCE # 37	51	38	70	0	0		0	3
SOURCE # 38	37	21	71	0	0		0	1
SOURCE # 39	37	21	71	0	0		0	1
SOURCE # 40	37	21	71	0	0		0	1
SOURCE # 41	38	21	71	0	0		0	1
SOURCE # 42	37	21	71	0	0		0	1
SOURCE # 43	37	21	71	0	0		0	1
SOURCE # 44	42	24	68	0	0		0	1
SOURCE # 45	42	24	68	0	0		0	1
SOURCE # 46	42	24	68	0	0		0	1
SOURCE # 47	40	23	70	0	0		0	1
SOURCE # 48	40	23	70	0	0		0	1

			OneMileResults.TXT				
SOURCE # 49	40	23	70	0	0	0	1
SOURCE # 50	33	19	63	0	0	0	3
SOURCE # 51	33	19	63	0	0	0	3
BACKGROUND	0	0					

□

TOTAL wo bkg	59	44
TOTAL w bkg	59	44

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 4	1M-4	75643	52933	527	
SOURCE # 1	Primary Crusher	79767	41378	548	12268
SOURCE # 2	SAG Mill	80714	41311	556	12679
SOURCE # 3	Ball Mill	80812	41287	556	12741
SOURCE # 4	Regrind Mill 1	80996	41228	559	12871
SOURCE # 5	Regrind Mill 2	81013	41223	559	12882
SOURCE # 6	Regrind Mill 3	81031	41219	559	12893
SOURCE # 7	Regrind Mill 4	80991	41208	559	12887
SOURCE # 8	Regrind Mill 5	81008	41204	559	12897
SOURCE # 9	Regrind Mill 6	81026	41199	559	12909
SOURCE # 10	ROSAHT 1	71900	35000	680	18320
SOURCE # 11	ROSAHT 2	71850	34950	680	18379
SOURCE # 12	ROSAHT 3	71800	34900	680	18438
SOURCE # 13	ROSADZ 1	71750	34850	680	18497
SOURCE # 14	ROSADZ 2	71700	34800	680	18557
SOURCE # 15	ROSADZ 3	71650	34750	680	18616
SOURCE # 16	ROSA BUA	71910	35010	675	18308
SOURCE # 17	JPHT 1	78200	39000	680	14166
SOURCE # 18	JPHT 2	78150	38950	680	14206
SOURCE # 19	JPHT 3	78100	38900	680	14247
SOURCE # 20	JPDZ 1	78050	38850	680	14288
SOURCE # 21	JPDZ 2	78000	38800	680	14329
SOURCE # 22	JPDZ3	78210	39010	680	14158
SOURCE # 23	JPBU	78210	39010	680	14158
SOURCE # 24	HOSAHT 1	77400	43400	720	9695
SOURCE # 25	HOSAHT 2	77350	43350	720	9735
SOURCE # 26	HOSAHT 3	77300	43300	720	9776
SOURCE # 27	HOSADZ 1	77250	43250	720	9817
SOURCE # 28	HOSADZ 2	77200	43200	720	9858
SOURCE # 29	HOSADZ 3	77150	43150	720	9900
SOURCE # 30	HOSABU	77410	43410	720	9687
SOURCE # 31	JOSAHT 1	80600	43700	630	10480
SOURCE # 32	JOSAHT 2	80550	43650	630	10500
SOURCE # 33	JOSAHT 3	80500	43600	630	10521
SOURCE # 34	JOSADZ 1	80450	43550	630	10543
SOURCE # 35	JOSADZ 2	80400	43500	630	10565
SOURCE # 36	JOSADZ 3	80350	43450	630	10587
SOURCE # 37	JOSABU	80610	43710	630	10475
SOURCE # 38	CPDRILL 1	75500	33700	460	19233
SOURCE # 39	CPDRILL 2	75450	33650	460	19284
SOURCE # 40	CPDRILL 3	75400	33600	460	19334
SOURCE # 41	SPDRILL 1	74000	34800	480	18207
SOURCE # 42	SPDRILL 2	73950	34750	480	18261
SOURCE # 43	SPDRILL 3	73900	34700	480	18316
SOURCE # 44	SKPDRILL 1	75600	42100	420	10833
SOURCE # 45	SKPDRILL 2	75550	42050	420	10883
SOURCE # 46	SKPDRILL 3	75500	42000	420	10934
SOURCE # 47	LPDRILL 1	76900	39600	440	13392
SOURCE # 48	LPDRILL 2	76850	39550	440	13437

OneMileResults.TXT

SOURCE # 49	LPDRILL 3	76800	39500	440	13483
SOURCE # 50	TSFHT	85300	37500	620	18205
SOURCE # 51	TSFDZ	85250	37450	620	18221

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	56	52	50	51	18	9	0	0	0
0									
A-wt	17	26	34	42	15	9	1	1	-2
-7									
0									

GEOSONICS SOUND-CALC SOUND PROJECTIONS
AT RECEIVER # 5 - 1M-5 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				BARRIERS	ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft			
SOURCE # 1	47	23	69	0	0		0	2
SOURCE # 2	46	23	70	0	0		0	2
SOURCE # 3	46	23	70	0	0		0	2
SOURCE # 4	38	19	59	0	0		0	0
SOURCE # 5	38	19	59	0	0		0	0
SOURCE # 6	38	19	59	0	0		0	0
SOURCE # 7	38	19	59	0	0		0	0
SOURCE # 8	38	19	59	0	0		0	0
SOURCE # 9	38	19	59	0	0		0	0
SOURCE # 10	38	20	62	0	0		0	1
SOURCE # 11	38	20	62	0	0		0	1
SOURCE # 12	38	20	62	0	0		0	1
SOURCE # 13	38	20	62	0	0		0	1
SOURCE # 14	38	20	62	0	0		0	1
SOURCE # 15	38	20	62	0	0		0	1
SOURCE # 16	53	39	68	0	0		0	2
SOURCE # 17	37	20	62	0	0		0	2
SOURCE # 18	37	20	62	0	0		0	2
SOURCE # 19	37	20	62	0	0		0	2
SOURCE # 20	37	20	62	0	0		0	2
SOURCE # 21	37	20	62	0	0		0	2
SOURCE # 22	37	20	62	0	0		0	2
SOURCE # 23	51	37	70	0	0		0	3
SOURCE # 24	38	20	62	0	0		0	1
SOURCE # 25	38	20	62	0	0		0	1
SOURCE # 26	38	20	62	0	0		0	1
SOURCE # 27	38	20	62	0	0		0	1
SOURCE # 28	38	20	62	0	0		0	1
SOURCE # 29	38	20	62	0	0		0	1
SOURCE # 30	52	39	69	0	0		0	2
SOURCE # 31	36	19	63	0	0		0	2
SOURCE # 32	36	19	63	0	0		0	2
SOURCE # 33	36	19	63	0	0		0	2
SOURCE # 34	36	20	63	0	0		0	2
SOURCE # 35	36	20	63	0	0		0	2
SOURCE # 36	36	20	63	0	0		0	2
SOURCE # 37	49	36	71	0	0		0	3
SOURCE # 38	41	23	69	0	0		0	1
SOURCE # 39	41	23	69	0	0		0	1
SOURCE # 40	41	23	69	0	0		0	1
SOURCE # 41	43	24	68	0	0		0	1
SOURCE # 42	43	24	68	0	0		0	1
SOURCE # 43	43	24	68	0	0		0	1
SOURCE # 44	45	26	66	0	0		0	0
SOURCE # 45	45	26	66	0	0		0	0

			OneMileResults.TXT					
SOURCE #	46	45	26	66	0	0	0	0
SOURCE #	47	43	25	68	0	0	0	1
SOURCE #	48	43	25	68	0	0	0	1
SOURCE #	49	43	25	68	0	0	0	1
SOURCE #	50	33	19	63	0	0	0	3
SOURCE #	51	33	19	63	0	0	0	3
BACKGROUND		0	0					

□

TOTAL wo bkg	60	45
TOTAL w bkg	60	45

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER #	5	1M-5	67908	43323	525	
SOURCE #	1	Primary Crusher	79767	41378	548	12017
SOURCE #	2	SAG Mill	80714	41311	556	12963
SOURCE #	3	Ball Mill	80812	41287	556	13064
SOURCE #	4	Regrind Mill 1	80996	41228	559	13254
SOURCE #	5	Regrind Mill 2	81013	41223	559	13272
SOURCE #	6	Regrind Mill 3	81031	41219	559	13290
SOURCE #	7	Regrind Mill 4	80991	41208	559	13252
SOURCE #	8	Regrind Mill 5	81008	41204	559	13270
SOURCE #	9	Regrind Mill 6	81026	41199	559	13288
SOURCE #	10	ROSAHT 1	71900	35000	680	9232
SOURCE #	11	ROSAHT 2	71850	34950	680	9255
SOURCE #	12	ROSAHT 3	71800	34900	680	9280
SOURCE #	13	ROSADZ 1	71750	34850	680	9304
SOURCE #	14	ROSADZ 2	71700	34800	680	9329
SOURCE #	15	ROSADZ 3	71650	34750	680	9355
SOURCE #	16	ROSA BUA	71910	35010	675	9227
SOURCE #	17	JPHT 1	78200	39000	680	11164
SOURCE #	18	JPHT 2	78150	38950	680	11137
SOURCE #	19	JPHT 3	78100	38900	680	11111
SOURCE #	20	JPDZ 1	78050	38850	680	11085
SOURCE #	21	JPDZ 2	78000	38800	680	11060
SOURCE #	22	JPDZ3	78210	39010	680	11169
SOURCE #	23	JPBU	78210	39010	680	11169
SOURCE #	24	HOSAHT 1	77400	43400	720	9494
SOURCE #	25	HOSAHT 2	77350	43350	720	9444
SOURCE #	26	HOSAHT 3	77300	43300	720	9394
SOURCE #	27	HOSADZ 1	77250	43250	720	9344
SOURCE #	28	HOSADZ 2	77200	43200	720	9294
SOURCE #	29	HOSADZ 3	77150	43150	720	9245
SOURCE #	30	HOSABU	77410	43410	720	9504
SOURCE #	31	JOSAHT 1	80600	43700	630	12698
SOURCE #	32	JOSAHT 2	80550	43650	630	12646
SOURCE #	33	JOSAHT 3	80500	43600	630	12595
SOURCE #	34	JOSADZ 1	80450	43550	630	12544
SOURCE #	35	JOSADZ 2	80400	43500	630	12493
SOURCE #	36	JOSADZ 3	80350	43450	630	12443
SOURCE #	37	JOSABU	80610	43710	630	12708
SOURCE #	38	CPDRILL 1	75500	33700	460	12257
SOURCE #	39	CPDRILL 2	75450	33650	460	12265
SOURCE #	40	CPDRILL 3	75400	33600	460	12274
SOURCE #	41	SPDRILL 1	74000	34800	480	10476
SOURCE #	42	SPDRILL 2	73950	34750	480	10488
SOURCE #	43	SPDRILL 3	73900	34700	480	10500
SOURCE #	44	SKPDRILL 1	75600	42100	420	7789
SOURCE #	45	SKPDRILL 2	75550	42050	420	7748

OneMileResults.TXT

SOURCE # 46	SKPDRILL 3	75500	42000	420	7707
SOURCE # 47	LPDRILL 1	76900	39600	440	9732
SOURCE # 48	LPDRILL 2	76850	39550	440	9705
SOURCE # 49	LPDRILL 3	76800	39500	440	9679
SOURCE # 50	TSFHT	85300	37500	620	18341
SOURCE # 51	TSFDZ	85250	37450	620	18309

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	57	54	53	52	20	12	0	0	0
0									
A-wt	18	28	37	44	17	12	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS AT RECEIVER # 6 - 1M-6 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	43	21	71	0	0	0	3
SOURCE # 2	43	21	71	0	0	0	3
SOURCE # 3	43	21	71	0	0	0	3
SOURCE # 4	35	19	59	0	0	0	1
SOURCE # 5	35	19	59	0	0	0	1
SOURCE # 6	35	19	59	0	0	0	1
SOURCE # 7	35	19	59	0	0	0	1
SOURCE # 8	35	19	59	0	0	0	1
SOURCE # 9	35	19	59	0	0	0	1
SOURCE # 10	39	20	62	0	0	0	1
SOURCE # 11	39	20	62	0	0	0	1
SOURCE # 12	39	20	62	0	0	0	1
SOURCE # 13	39	20	62	0	0	0	1
SOURCE # 14	39	20	62	0	0	0	1
SOURCE # 15	39	20	62	0	0	0	1
SOURCE # 16	53	40	68	0	0	0	2
SOURCE # 17	34	19	63	0	0	0	2
SOURCE # 18	34	19	63	0	0	0	2
SOURCE # 19	34	19	63	0	0	0	2
SOURCE # 20	34	19	63	0	0	0	2
SOURCE # 21	34	19	63	0	0	0	2
SOURCE # 22	34	19	63	0	0	0	2
SOURCE # 23	47	33	73	0	0	0	4
SOURCE # 24	33	19	63	0	0	0	2
SOURCE # 25	33	19	63	0	0	0	2
SOURCE # 26	34	19	63	0	0	0	2
SOURCE # 27	34	19	63	0	0	0	2
SOURCE # 28	34	19	63	0	0	0	2
SOURCE # 29	34	19	63	0	0	0	2
SOURCE # 30	47	32	73	0	0	0	4
SOURCE # 31	32	19	63	0	0	0	3
SOURCE # 32	32	19	63	0	0	0	3
SOURCE # 33	32	19	63	0	0	0	3
SOURCE # 34	32	19	63	0	0	0	3
SOURCE # 35	32	19	63	0	0	0	3
SOURCE # 36	32	19	63	0	0	0	3
SOURCE # 37	45	30	75	0	0	0	5
SOURCE # 38	41	23	69	0	0	0	1
SOURCE # 39	41	23	69	0	0	0	1
SOURCE # 40	41	23	69	0	0	0	1
SOURCE # 41	42	24	68	0	0	0	1
SOURCE # 42	42	24	68	0	0	0	1

OneMileResults.TXT							
SOURCE # 43	43	24	68	0	0	0	1
SOURCE # 44	40	22	70	0	0	0	1
SOURCE # 45	40	23	70	0	0	0	1
SOURCE # 46	40	23	70	0	0	0	1
SOURCE # 47	40	22	70	0	0	0	1
SOURCE # 48	40	22	70	0	0	0	1
SOURCE # 49	40	22	70	0	0	0	1
SOURCE # 50	31	19	63	0	0	0	3
SOURCE # 51	31	19	63	0	0	0	3
BACKGROUND	0	0					

0

TOTAL wo bkg	58	43
TOTAL w bkg	58	43

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 6	1M-6	63305	34813	500	
SOURCE # 1	Primary Crusher	79767	41378	548	17722
SOURCE # 2	SAG Mill	80714	41311	556	18583
SOURCE # 3	Ball Mill	80812	41287	556	18666
SOURCE # 4	Regrind Mill 1	80996	41228	559	18818
SOURCE # 5	Regrind Mill 2	81013	41223	559	18832
SOURCE # 6	Regrind Mill 3	81031	41219	559	18848
SOURCE # 7	Regrind Mill 4	80991	41208	559	18806
SOURCE # 8	Regrind Mill 5	81008	41204	559	18821
SOURCE # 9	Regrind Mill 6	81026	41199	559	18836
SOURCE # 10	ROSAHT 1	71900	35000	680	8598
SOURCE # 11	ROSAHT 2	71850	34950	680	8548
SOURCE # 12	ROSAHT 3	71800	34900	680	8497
SOURCE # 13	ROSADZ 1	71750	34850	680	8447
SOURCE # 14	ROSADZ 2	71700	34800	680	8396
SOURCE # 15	ROSADZ 3	71650	34750	680	8347
SOURCE # 16	ROSA BUA	71910	35010	675	8609
SOURCE # 17	JPHT 1	78200	39000	680	15473
SOURCE # 18	JPHT 2	78150	38950	680	15411
SOURCE # 19	JPHT 3	78100	38900	680	15350
SOURCE # 20	JPDZ 1	78050	38850	680	15288
SOURCE # 21	JPDZ 2	78000	38800	680	15227
SOURCE # 22	JPDZ3	78210	39010	680	15485
SOURCE # 23	JPBU	78210	39010	680	15485
SOURCE # 24	HOSAHT 1	77400	43400	720	16506
SOURCE # 25	HOSAHT 2	77350	43350	720	16437
SOURCE # 26	HOSAHT 3	77300	43300	720	16368
SOURCE # 27	HOSADZ 1	77250	43250	720	16300
SOURCE # 28	HOSADZ 2	77200	43200	720	16231
SOURCE # 29	HOSADZ 3	77150	43150	720	16162
SOURCE # 30	HOSABU	77410	43410	720	16519
SOURCE # 31	JOSAHT 1	80600	43700	630	19445
SOURCE # 32	JOSAHT 2	80550	43650	630	19377
SOURCE # 33	JOSAHT 3	80500	43600	630	19310
SOURCE # 34	JOSADZ 1	80450	43550	630	19243
SOURCE # 35	JOSADZ 2	80400	43500	630	19176
SOURCE # 36	JOSADZ 3	80350	43450	630	19108
SOURCE # 37	JOSABU	80610	43710	630	19458
SOURCE # 38	CPDRILL 1	75500	33700	460	12245
SOURCE # 39	CPDRILL 2	75450	33650	460	12200
SOURCE # 40	CPDRILL 3	75400	33600	460	12155
SOURCE # 41	SPDRILL 1	74000	34800	480	10695
SOURCE # 42	SPDRILL 2	73950	34750	480	10645

OneMileResults.TXT

SOURCE # 43	SPDRILL 3	73900	34700	480	10595
SOURCE # 44	SKPDRILL 1	75600	42100	420	14292
SOURCE # 45	SKPDRILL 2	75550	42050	420	14223
SOURCE # 46	SKPDRILL 3	75500	42000	420	14155
SOURCE # 47	LPDRILL 1	76900	39600	440	14413
SOURCE # 48	LPDRILL 2	76850	39550	440	14349
SOURCE # 49	LPDRILL 3	76800	39500	440	14285
SOURCE # 50	TSFHT	85300	37500	620	22158
SOURCE # 51	TSFDZ	85250	37450	620	22103

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	55	52	50	50	17	9	0	0	0
0									
A-wt	15	26	34	41	14	9	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS AT RECEIVER # 7 - 1M-7 -

PROJECT - HGMWC

CONTRIBUTOR		SPL		DBA ATTENUATION FROM REF. DISTANCE				ATMOS.
		DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	
SOURCE # 1	43	21	71	0	0	0	3	
SOURCE # 2	43	21	71	0	0	0	3	
SOURCE # 3	43	21	71	0	0	0	3	
SOURCE # 4	36	19	59	0	0	0	1	
SOURCE # 5	36	19	59	0	0	0	1	
SOURCE # 6	36	19	59	0	0	0	1	
SOURCE # 7	35	19	59	0	0	0	1	
SOURCE # 8	35	19	59	0	0	0	1	
SOURCE # 9	35	19	59	0	0	0	1	
SOURCE # 10	37	20	62	0	0	0	2	
SOURCE # 11	37	20	62	0	0	0	2	
SOURCE # 12	37	20	62	0	0	0	2	
SOURCE # 13	37	20	62	0	0	0	2	
SOURCE # 14	37	20	62	0	0	0	2	
SOURCE # 15	37	20	62	0	0	0	2	
SOURCE # 16	51	38	70	0	0	0	3	
SOURCE # 17	34	19	63	0	0	0	2	
SOURCE # 18	34	19	63	0	0	0	2	
SOURCE # 19	34	19	63	0	0	0	2	
SOURCE # 20	34	19	63	0	0	0	2	
SOURCE # 21	34	19	63	0	0	0	2	
SOURCE # 22	34	19	63	0	0	0	2	
SOURCE # 23	47	33	73	0	0	0	4	
SOURCE # 24	32	19	63	0	0	0	3	
SOURCE # 25	32	19	63	0	0	0	3	
SOURCE # 26	32	19	63	0	0	0	3	
SOURCE # 27	32	19	63	0	0	0	3	
SOURCE # 28	32	19	63	0	0	0	3	
SOURCE # 29	32	19	63	0	0	0	3	
SOURCE # 30	45	30	75	0	0	0	5	
SOURCE # 31	32	19	63	0	0	0	3	
SOURCE # 32	32	19	63	0	0	0	3	
SOURCE # 33	32	19	63	0	0	0	3	
SOURCE # 34	32	19	63	0	0	0	3	
SOURCE # 35	32	19	63	0	0	0	3	
SOURCE # 36	32	19	63	0	0	0	3	
SOURCE # 37	44	29	75	0	0	0	6	
SOURCE # 38	43	25	68	0	0	0	1	
SOURCE # 39	44	25	67	0	0	0	1	

			OneMileResults.TXT				
SOURCE # 40	44	25	67	0	0	0	1
SOURCE # 41	43	24	68	0	0	0	1
SOURCE # 42	43	24	68	0	0	0	1
SOURCE # 43	43	24	68	0	0	0	1
SOURCE # 44	38	22	71	0	0	0	1
SOURCE # 45	38	22	71	0	0	0	1
SOURCE # 46	38	22	71	0	0	0	1
SOURCE # 47	39	22	70	0	0	0	1
SOURCE # 48	39	22	70	0	0	0	1
SOURCE # 49	39	22	70	0	0	0	1
SOURCE # 50	33	19	63	0	0	0	3
SOURCE # 51	33	19	63	0	0	0	3
BACKGROUND	0	0					

□

TOTAL wo bkg	58	42
TOTAL w bkg	58	42

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

			X	Y	Z	DST
RECEIVER # 7	1M-7		72776	24562	500	
SOURCE # 1	Primary Crusher		79767	41378	548	18211
SOURCE # 2	SAG Mill		80714	41311	556	18536
SOURCE # 3	Ball Mill		80812	41287	556	18556
SOURCE # 4	Regrind Mill 1		80996	41228	559	18582
SOURCE # 5	Regrind Mill 2		81013	41223	559	18586
SOURCE # 6	Regrind Mill 3		81031	41219	559	18590
SOURCE # 7	Regrind Mill 4		80991	41208	559	18562
SOURCE # 8	Regrind Mill 5		81008	41204	559	18566
SOURCE # 9	Regrind Mill 6		81026	41199	559	18570
SOURCE # 10	ROSAHT 1		71900	35000	680	10476
SOURCE # 11	ROSAHT 2		71850	34950	680	10430
SOURCE # 12	ROSAHT 3		71800	34900	680	10385
SOURCE # 13	ROSADZ 1		71750	34850	680	10340
SOURCE # 14	ROSADZ 2		71700	34800	680	10295
SOURCE # 15	ROSADZ 3		71650	34750	680	10251
SOURCE # 16	ROSA BUA		71910	35010	675	10485
SOURCE # 17	JPHT 1		78200	39000	680	15424
SOURCE # 18	JPHT 2		78150	38950	680	15359
SOURCE # 19	JPHT 3		78100	38900	680	15295
SOURCE # 20	JPDZ 1		78050	38850	680	15231
SOURCE # 21	JPDZ 2		78000	38800	680	15167
SOURCE # 22	JPDZ3		78210	39010	680	15437
SOURCE # 23	JPBU		78210	39010	680	15437
SOURCE # 24	HOSAHT 1		77400	43400	720	19398
SOURCE # 25	HOSAHT 2		77350	43350	720	19338
SOURCE # 26	HOSAHT 3		77300	43300	720	19277
SOURCE # 27	HOSADZ 1		77250	43250	720	19217
SOURCE # 28	HOSADZ 2		77200	43200	720	19157
SOURCE # 29	HOSADZ 3		77150	43150	720	19096
SOURCE # 30	HOSABU		77410	43410	720	19410
SOURCE # 31	JOSAHT 1		80600	43700	630	20675
SOURCE # 32	JOSAHT 2		80550	43650	630	20610
SOURCE # 33	JOSAHT 3		80500	43600	630	20545
SOURCE # 34	JOSADZ 1		80450	43550	630	20480
SOURCE # 35	JOSADZ 2		80400	43500	630	20415
SOURCE # 36	JOSADZ 3		80350	43450	630	20350
SOURCE # 37	JOSABU		80610	43710	630	20689
SOURCE # 38	CPDRILL 1		75500	33700	460	9535
SOURCE # 39	CPDRILL 2		75450	33650	460	9473

OneMileResults.TXT

SOURCE # 40	CPDRILL 3	75400	33600	460	9411
SOURCE # 41	SPDRILL 1	74000	34800	480	10310
SOURCE # 42	SPDRILL 2	73950	34750	480	10255
SOURCE # 43	SPDRILL 3	73900	34700	480	10200
SOURCE # 44	SKPDRILL 1	75600	42100	420	17764
SOURCE # 45	SKPDRILL 2	75550	42050	420	17706
SOURCE # 46	SKPDRILL 3	75500	42000	420	17649
SOURCE # 47	LPDRILL 1	76900	39600	440	15593
SOURCE # 48	LPDRILL 2	76850	39550	440	15531
SOURCE # 49	LPDRILL 3	76800	39500	440	15470
SOURCE # 50	TSFHT	85300	37500	620	18007
SOURCE # 51	TSFDZ	85250	37450	620	17936

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2k	4k	8000
16K									
LINEAR	54	52	50	48	15	6	0	0	0
0									
A-wt	15	26	34	39	12	6	1	1	-2
-7									
□									

GEOSONICS SOUND-CALC SOUND PROJECTIONS AT RECEIVER # 8 - 1M-8 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE					ATMOS.
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS		
SOURCE # 1	43	21	71	0	0	0	3	
SOURCE # 2	43	21	71	0	0	0	3	
SOURCE # 3	43	21	71	0	0	0	3	
SOURCE # 4	36	19	59	0	0	0	1	
SOURCE # 5	36	19	59	0	0	0	1	
SOURCE # 6	36	19	59	0	0	0	1	
SOURCE # 7	36	19	59	0	0	0	1	
SOURCE # 8	36	19	59	0	0	0	1	
SOURCE # 9	36	19	59	0	0	0	1	
SOURCE # 10	32	19	63	0	0	0	3	
SOURCE # 11	32	19	63	0	0	0	3	
SOURCE # 12	32	19	63	0	0	0	3	
SOURCE # 13	32	19	63	0	0	0	3	
SOURCE # 14	32	19	63	0	0	0	3	
SOURCE # 15	32	19	63	0	0	0	3	
SOURCE # 16	46	31	74	0	0	0	5	
SOURCE # 17	33	19	63	0	0	0	3	
SOURCE # 18	33	19	63	0	0	0	3	
SOURCE # 19	33	19	63	0	0	0	3	
SOURCE # 20	33	19	63	0	0	0	3	
SOURCE # 21	33	19	63	0	0	0	3	
SOURCE # 22	33	19	63	0	0	0	3	
SOURCE # 23	47	32	74	0	0	0	5	
SOURCE # 24	31	19	63	0	0	0	3	
SOURCE # 25	31	19	63	0	0	0	3	
SOURCE # 26	31	19	63	0	0	0	3	
SOURCE # 27	31	19	63	0	0	0	3	
SOURCE # 28	31	19	63	0	0	0	3	
SOURCE # 29	31	19	63	0	0	0	3	
SOURCE # 30	44	29	75	0	0	0	6	
SOURCE # 31	32	19	63	0	0	0	3	
SOURCE # 32	32	19	63	0	0	0	3	
SOURCE # 33	32	19	63	0	0	0	3	
SOURCE # 34	32	19	63	0	0	0	3	
SOURCE # 35	32	19	63	0	0	0	3	
SOURCE # 36	32	19	63	0	0	0	3	

OneMileResults.TXT							
SOURCE # 37	45	30	75	0	0	0	5
SOURCE # 38	40	22	70	0	0	0	1
SOURCE # 39	39	22	70	0	0	0	1
SOURCE # 40	39	22	70	0	0	0	1
SOURCE # 41	38	22	71	0	0	0	1
SOURCE # 42	38	22	71	0	0	0	1
SOURCE # 43	38	22	71	0	0	0	1
SOURCE # 44	36	21	71	0	0	0	2
SOURCE # 45	36	21	71	0	0	0	2
SOURCE # 46	36	21	71	0	0	0	2
SOURCE # 47	38	22	71	0	0	0	1
SOURCE # 48	38	22	71	0	0	0	1
SOURCE # 49	38	22	71	0	0	0	1
SOURCE # 50	36	19	63	0	0	0	2
SOURCE # 51	36	19	63	0	0	0	2
BACKGROUND	0	0					

TOTAL wo bkg 56 40
 TOTAL w bkg 56 40

TEMPERATURE 15 C 58 F RELATIVE HUMIDITY 70 % REF. DISTANCE 3

COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 8	1M-8	87368	25036	525	
SOURCE # 1	Primary Crusher	79767	41378	548	18023
SOURCE # 2	SAG Mill	80714	41311	556	17583
SOURCE # 3	Ball Mill	80812	41287	556	17524
SOURCE # 4	Regrind Mill 1	80996	41228	559	17400
SOURCE # 5	Regrind Mill 2	81013	41223	559	17389
SOURCE # 6	Regrind Mill 3	81031	41219	559	17379
SOURCE # 7	Regrind Mill 4	80991	41208	559	17383
SOURCE # 8	Regrind Mill 5	81008	41204	559	17374
SOURCE # 9	Regrind Mill 6	81026	41199	559	17362
SOURCE # 10	ROSAHT 1	71900	35000	680	18400
SOURCE # 11	ROSAHT 2	71850	34950	680	18415
SOURCE # 12	ROSAHT 3	71800	34900	680	18430
SOURCE # 13	ROSADZ 1	71750	34850	680	18446
SOURCE # 14	ROSADZ 2	71700	34800	680	18462
SOURCE # 15	ROSADZ 3	71650	34750	680	18478
SOURCE # 16	ROSA BUA	71910	35010	675	18397
SOURCE # 17	JPHT 1	78200	39000	680	16705
SOURCE # 18	JPHT 2	78150	38950	680	16691
SOURCE # 19	JPHT 3	78100	38900	680	16677
SOURCE # 20	JPDZ 1	78050	38850	680	16663
SOURCE # 21	JPDZ 2	78000	38800	680	16650
SOURCE # 22	JPDZ3	78210	39010	680	16708
SOURCE # 23	JPBU	78210	39010	680	16708
SOURCE # 24	HOSAHT 1	77400	43400	720	20895
SOURCE # 25	HOSAHT 2	77350	43350	720	20875
SOURCE # 26	HOSAHT 3	77300	43300	720	20856
SOURCE # 27	HOSADZ 1	77250	43250	720	20836
SOURCE # 28	HOSADZ 2	77200	43200	720	20817
SOURCE # 29	HOSADZ 3	77150	43150	720	20798
SOURCE # 30	HOSABU	77410	43410	720	20899
SOURCE # 31	JOSAHT 1	80600	43700	630	19853
SOURCE # 32	JOSAHT 2	80550	43650	630	19823
SOURCE # 33	JOSAHT 3	80500	43600	630	19794
SOURCE # 34	JOSADZ 1	80450	43550	630	19764
SOURCE # 35	JOSADZ 2	80400	43500	630	19735
SOURCE # 36	JOSADZ 3	80350	43450	630	19706

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SOURCE # 37	JOSABU	80610	43710	630	19859
SOURCE # 38	CPDRILL 1	75500	33700	460	14694
SOURCE # 39	CPDRILL 2	75450	33650	460	14705
SOURCE # 40	CPDRILL 3	75400	33600	460	14716
SOURCE # 41	SPDRILL 1	74000	34800	480	16554
SOURCE # 42	SPDRILL 2	73950	34750	480	16565
SOURCE # 43	SPDRILL 3	73900	34700	480	16576
SOURCE # 44	SKPDRILL 1	75600	42100	420	20728
SOURCE # 45	SKPDRILL 2	75550	42050	420	20716
SOURCE # 46	SKPDRILL 3	75500	42000	420	20703
SOURCE # 47	LPDRILL 1	76900	39600	440	17935
SOURCE # 48	LPDRILL 2	76850	39550	440	17924
SOURCE # 49	LPDRILL 3	76800	39500	440	17913
SOURCE # 50	TSFHT	85300	37500	620	12634
SOURCE # 51	TSFDZ	85250	37450	620	12593

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2K	4K	8000
16K									
LINEAR	53	49	47	44	10	0	0	0	0
0									
A-wt	13	23	31	36	7	0	1	1	-2
-7									

□

GEOSONICS SOUND-CALC SOUND PROJECTIONS AT RECEIVER # 9 - 1M-9 -

PROJECT - HGMWC

CONTRIBUTOR	SPL		DBA ATTENUATION FROM REF. DISTANCE				
	DB(Lin)	DBA	SPHERE	PATH	/1000 Ft	BARRIERS	ATMOS.
SOURCE # 1	43	21	71	0	0	0	3
SOURCE # 2	43	21	71	0	0	0	3
SOURCE # 3	44	21	71	0	0	0	3
SOURCE # 4	36	19	59	0	0	0	1
SOURCE # 5	36	19	59	0	0	0	1
SOURCE # 6	36	19	59	0	0	0	1
SOURCE # 7	36	19	59	0	0	0	1
SOURCE # 8	36	19	59	0	0	0	1
SOURCE # 9	36	19	59	0	0	0	1
SOURCE # 10	30	19	63	0	0	0	3
SOURCE # 11	30	19	63	0	0	0	3
SOURCE # 12	30	19	63	0	0	0	3
SOURCE # 13	30	19	63	0	0	0	3
SOURCE # 14	30	19	63	0	0	0	3
SOURCE # 15	30	19	63	0	0	0	3
SOURCE # 16	43	28	76	0	0	0	6
SOURCE # 17	32	19	63	0	0	0	3
SOURCE # 18	32	19	63	0	0	0	3
SOURCE # 19	32	19	63	0	0	0	3
SOURCE # 20	32	19	63	0	0	0	3
SOURCE # 21	32	19	63	0	0	0	3
SOURCE # 22	32	19	63	0	0	0	3
SOURCE # 23	46	31	74	0	0	0	5
SOURCE # 24	31	19	63	0	0	0	3
SOURCE # 25	31	19	63	0	0	0	3
SOURCE # 26	31	19	63	0	0	0	3
SOURCE # 27	31	19	63	0	0	0	3
SOURCE # 28	31	19	63	0	0	0	3
SOURCE # 29	31	19	63	0	0	0	3
SOURCE # 30	44	29	76	0	0	0	6
SOURCE # 31	32	19	63	0	0	0	3
SOURCE # 32	32	19	63	0	0	0	3
SOURCE # 33	32	19	63	0	0	0	3

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SOURCE # 34	32	19	63	0	0	0	3
SOURCE # 35	32	19	63	0	0	0	3
SOURCE # 36	32	19	63	0	0	0	3
SOURCE # 37	45	31	75	0	0	0	5
SOURCE # 38	37	21	71	0	0	0	2
SOURCE # 39	37	21	71	0	0	0	2
SOURCE # 40	37	21	71	0	0	0	2
SOURCE # 41	36	21	71	0	0	0	2
SOURCE # 42	36	21	71	0	0	0	2
SOURCE # 43	36	21	71	0	0	0	2
SOURCE # 44	36	21	72	0	0	0	2
SOURCE # 45	36	21	72	0	0	0	2
SOURCE # 46	36	21	72	0	0	0	2
SOURCE # 47	37	21	71	0	0	0	2
SOURCE # 48	37	21	71	0	0	0	2
SOURCE # 49	37	21	71	0	0	0	2
SOURCE # 50	37	20	62	0	0	0	2
SOURCE # 51	37	20	62	0	0	0	2
BACKGROUND	0	0					

□

TOTAL wo bkg	55	39
TOTAL w bkg	55	39

TEMPERATURE	15 C	58 F	RELATIVE HUMIDITY	70 %	REF. DISTANCE	3
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COORDINATE LOCATIONS (Ft)

		X	Y	Z	DST
RECEIVER # 9	1M-9	94826	30997	525	
SOURCE # 1	Primary Crusher	79767	41378	548	18290
SOURCE # 2	SAG Mill	80714	41311	556	17479
SOURCE # 3	Ball Mill	80812	41287	556	17386
SOURCE # 4	Regrind Mill 1	80996	41228	559	17203
SOURCE # 5	Regrind Mill 2	81013	41223	559	17186
SOURCE # 6	Regrind Mill 3	81031	41219	559	17169
SOURCE # 7	Regrind Mill 4	80991	41208	559	17195
SOURCE # 8	Regrind Mill 5	81008	41204	559	17179
SOURCE # 9	Regrind Mill 6	81026	41199	559	17161
SOURCE # 10	ROSAHT 1	71900	35000	680	23273
SOURCE # 11	ROSAHT 2	71850	34950	680	23314
SOURCE # 12	ROSAHT 3	71800	34900	680	23354
SOURCE # 13	ROSADZ 1	71750	34850	680	23395
SOURCE # 14	ROSADZ 2	71700	34800	680	23437
SOURCE # 15	ROSADZ 3	71650	34750	680	23478
SOURCE # 16	ROSA BUA	71910	35010	675	23265
SOURCE # 17	JPHT 1	78200	39000	680	18452
SOURCE # 18	JPHT 2	78150	38950	680	18476
SOURCE # 19	JPHT 3	78100	38900	680	18499
SOURCE # 20	JPDZ 1	78050	38850	680	18523
SOURCE # 21	JPDZ 2	78000	38800	680	18547
SOURCE # 22	JPDZ3	78210	39010	680	18447
SOURCE # 23	JPBU	78210	39010	680	18447
SOURCE # 24	HOSAHT 1	77400	43400	720	21390
SOURCE # 25	HOSAHT 2	77350	43350	720	21401
SOURCE # 26	HOSAHT 3	77300	43300	720	21414
SOURCE # 27	HOSADZ 1	77250	43250	720	21426
SOURCE # 28	HOSADZ 2	77200	43200	720	21438
SOURCE # 29	HOSADZ 3	77150	43150	720	21451
SOURCE # 30	HOSABU	77410	43410	720	21387
SOURCE # 31	JOSAHT 1	80600	43700	630	19072
SOURCE # 32	JOSAHT 2	80550	43650	630	19076
SOURCE # 33	JOSAHT 3	80500	43600	630	19080

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SOURCE # 34	JOSADZ 1	80450	43550	630	19085
SOURCE # 35	JOSADZ 2	80400	43500	630	19090
SOURCE # 36	JOSADZ 3	80350	43450	630	19095
SOURCE # 37	JOSABU	80610	43710	630	19071
SOURCE # 38	CPDRILL 1	75500	33700	460	19514
SOURCE # 39	CPDRILL 2	75450	33650	460	19556
SOURCE # 40	CPDRILL 3	75400	33600	460	19599
SOURCE # 41	SPDRILL 1	74000	34800	480	21170
SOURCE # 42	SPDRILL 2	73950	34750	480	21210
SOURCE # 43	SPDRILL 3	73900	34700	480	21251
SOURCE # 44	SKPDRILL 1	75600	42100	420	22201
SOURCE # 45	SKPDRILL 2	75550	42050	420	22220
SOURCE # 46	SKPDRILL 3	75500	42000	420	22238
SOURCE # 47	LPDRILL 1	76900	39600	440	19883
SOURCE # 48	LPDRILL 2	76850	39550	440	19907
SOURCE # 49	LPDRILL 3	76800	39500	440	19931
SOURCE # 50	TSFHT	85300	37500	620	11534
SOURCE # 51	TSFDZ	85250	37450	620	11547

PROJECTED OCTAVE LEVELS:

OCTAVE	31.5	63	125	250	500	1000	2k	4k	8000
16K									
LINEAR	52	48	46	43	8	0	0	0	0
0									
A-wt	13	22	30	35	5	0	1	1	-2
-7									
□									